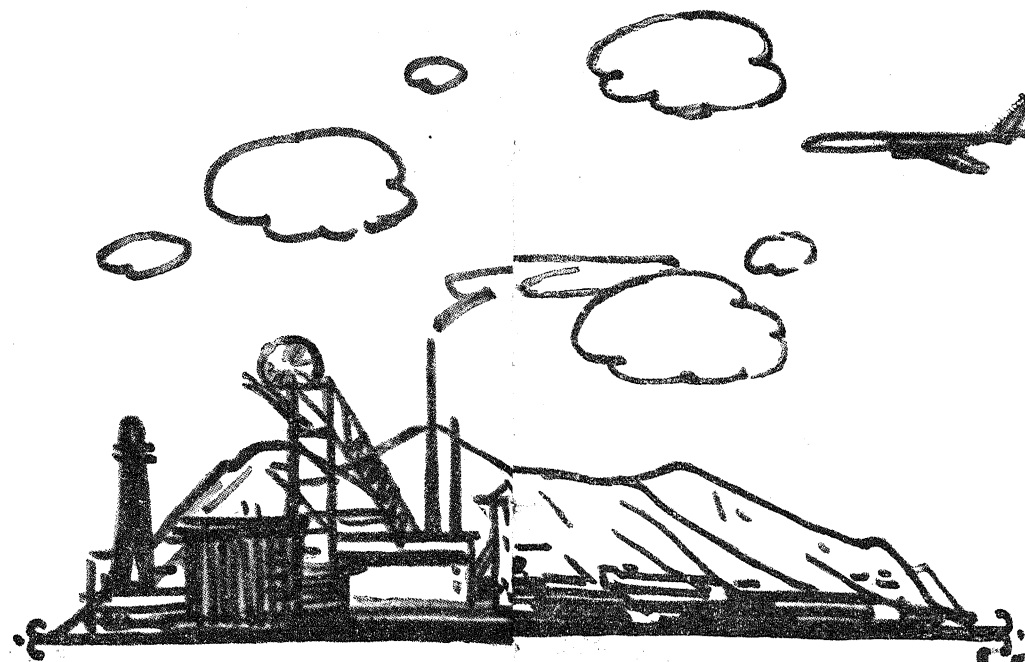


В. ВИТКОВИЧ
С ВАМИ
ПО КИРГИЗИИ

Путевые очерки

ИЗДАТЕЛЬСТВО ЛИТЕРАТУРЫ
НА ИНОСТРАННЫХ ЯЗЫКАХ
МОСКВА



15 234

V. VITKOVICH
KIRGHIZIA
TODAY

Travel Notes

FOREIGN LANGUAGES
PUBLISHING HOUSE
MOSCOW



TRANSLATED FROM THE RUSSIAN
BY DAVID SKVIRSKY

CONTENTS

Foreword	9
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THE CHU VALLEY

1 The First Evening	13
2 Mountains	17
3 City of Frunze	19
4 On the Road of Creation	23
5 "They Have Built, They Are Building"	28
6. Tekmé	35
7 Sunday	44
8 Features of the New	48
9 Pages Out of the Recent Past	55
10 Romeo and Juliet of Pishpek Uyezd	63
11 Valley of Sugar	68
12 Land of Panfilov's Men	74
13 From the Chumysh Cliffs to Orto-Tokoi	81

AROUND LAKE ISSYK-KUL

1 Kirghiz Sea	93
2 At the Monument to Nikolai Przhevalsky	101
3 From Przhevalsk	108
4. Irdyk	113
5 In the Ravines Around Issyk-Kul	121
6. Holiday Lake	129
7 Cholpon-Ata	143

IN THE SOUTH

1 Three Towns	159
2 Ferghana Ring	168
3 Red Uphill Road	176
4 Alai	184
5. In the Forests of Southern Kirghizia	194

CENTRAL TIEN SHANS

1 Road to Toktogul	207
2 "An Emerald in a Silver Setting!"	218
3. At the Sources of the Talass River	227
4 Valley of Golden Rams	235
5 Heart of the Tien Shans	240
6. With a Double-Barrelled Gun	250
7 Cold Desert	258

Travels, like a wise man, help you to
appreciate both the big and the little

Dungan saying

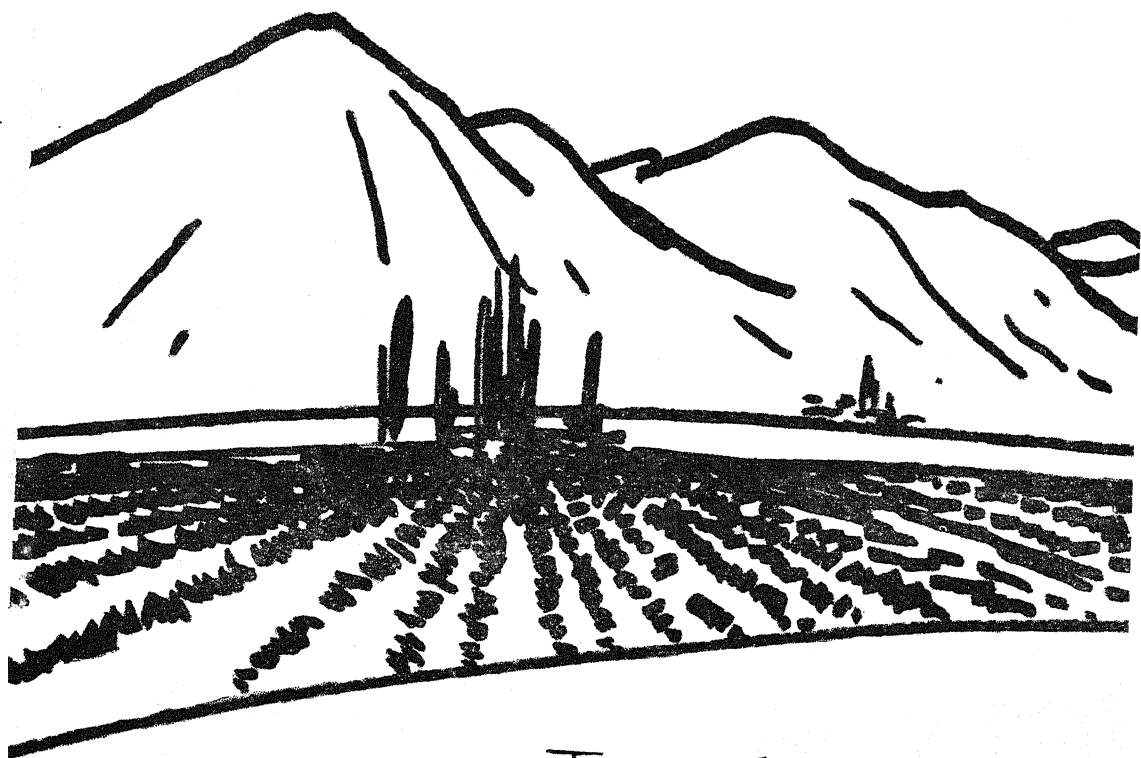
FOREWORD

A travel diary is usually the result of a single journey and in it the author gives a day-by-day description of all that attracted his attention on the way.

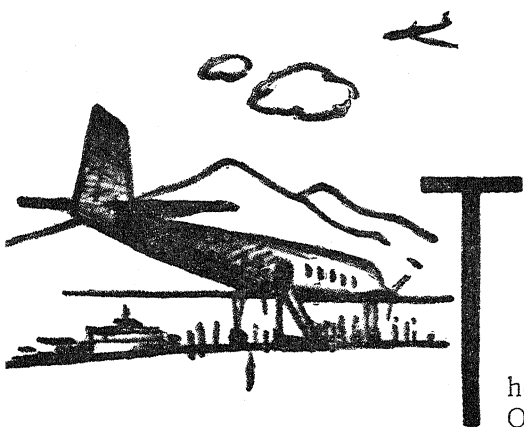
I have had the good fortune to travel across Kirghizia on seven different occasions and collected enough material for seven travel diaries. But I thought it would be much more interesting, dear reader, to act as your guide as you travel across the country.

Even though I have been to Kirghizia seven times, I naturally could not cover all the ground and see everything. So do not expect an all-embracing picture of the life of Kirghizia: some things I shall describe in detail, others in passing, and still others I shall not mention at all. In the years that I have been in that country I have, of course, seen difficulties and incongruities and little things that annoy people and tear them away from a contemplation of big things, use up their time and embitter their hearts. But as the years go by, the little things pass and the big things remain.

This is especially evident when you return after a long stretch of time. It is about these big things that I want to tell you, so that you will be able to see them as clearly as a person who has been to Kirghizia before.



THE CHU VALLE



1. THE FIRST EVENING

The city of Frunze lies beneath us. Our aircraft circles and makes for the landing strip. We wait tensely for the wheels to touch the ground. There is a light jolt. . . . We sigh with relief. And while the aircraft, losing speed, taxies towards the airport building, we are gripped by a feeling that is familiar to every traveller wherever he goes and whatever the mode of conveyance: aircraft, ship or train. It is that elated, energetic but slightly preoccupied and somehow constrained feeling when you already have your suitcase in your hand and are ready to make a rush for the exit and yet are still looking about you to see if you haven't forgotten anything.

We at last set foot on the ground. And although our ears are still filled with the hum of the engine, we no longer think of our aircraft

but surrender ourselves to the new impressions and gaze excitedly about us.

The Kirghiz Range with its blanket of snow stands a short distance away, dominating everything around it. We take a taxi and soon these majestic mountains are hidden from us by the luxuriant trees of the Kirghiz capital. The streets are lined with poplars, elms, oaks, locusts and white acacias. Interspersed with them are thujas with their dark-green foliage, and the silvery leaves of the oleaster. The dust-laden greenery of fruit-trees hangs over the fences.

These gardens, parks and boulevards are lovely, especially in May, when they are filled with the unceasing hubbub, chattering and twittering of birds. The trilling of Indian tomtits, the gentle cooing of turtle-doves and the chirping of the pugnacious sparrows form a constant background to the hooting of the cars, the whirring of tyres on the asphalt, the wind-carried whistles of steam-engines and all the other noises of a big industrial city.

The voice of a solitary cuckoo is sometimes heard in the city. If we are to believe a Kirghiz tale, it cries: "Aat jok kokok!" which means "No horse, coo-coo!" One of the cuckoo's legs is believed to be red and the other blue, and the children in the kindergartens will tell you that the reason for this is that in its hurry the cuckoo pulled on unmatched boots when it set out to look for the horse of its sister's bridegroom. The horse had broken loose and wandered away, and the cuckoo kept calling to its sister. "No horse, still no horse, coo-coo!" Now and then the flute-like whistle of the oriole cuts into the hardly audible ringing of the trolleybus wires quivering in the wind.

... In the evening after we had had a rest, washed, changed and left the Kirghizstan Hotel, the sky was already sprinkled with low-hanging twinkling stars. On their first evening in the city, when they still have nothing to do, many visitors who have been here before go to the Krasnaya *Chaikhana*, which is three blocks away from the hotel. They can, of course have their dinner in the restaurant at the hotel. But in the summer it is so much more pleasant to dine in the Krasnaya *Chaikhana* in the coolness of the canopy formed by the trees, by the light of electric lamps swinging in the breeze. Another thing that attracts the newcomer is that at the *chaikhana* he can order a Central Asian dish and a bowl or two of koumiss.

That summer evening streams of heated air were still rising from the asphalt but it was mixing with the cool breeze blowing from the mountains. The Krasnaya *Chaikhana* was crowded. There were people inside the *chaikhana* and in the open verandah with a carved roof resting on thin columns and a Kirghiz ornament painted on the walls. There were people in the *chaikhana* garden as well, sitting at tables each with a little marble leg shaped like a thin-necked jug. The air was satiated with the smell of roses mixed with the aroma of *shashlik*, hot flat cakes and *borsoks*—tiny pieces of dough fried in oil.

In the evening the street outside the Krasnaya *Chaikhana* is the busiest in the city. Near the railings of the Oak Gardens, a statue of Lenin reaching to the very crowns of the trees and facing the mountains gleams white on a pale-pink, graceful and very tall column. Endless throngs of people move past the foot of the statue.

People collect round the stalls with ice-cream, cigarettes, fruit and masses of flowers. There was a crowd standing in a semi-circle on the far side of this live river in front of a soft-drink pavilion built to resemble a *yurta*. But the crowd was thickest at the corner, at the entrance of the Alatau Cinema.

This was a beautiful hour of the evening. The street lamps dimmed the lustre of the stars, and a voice singing fragments from the opera *Aichurek* came from a loudspeaker hanging near by.

*The coins in the braids of our girls
Ring like silver bells in the air.
Look round, O friends, look round,
Who will say that our girls are not fair?*

And a girls' chorus replied:

*The belts that girdle our lads
Ring like bells in the twilight air.
Look round, O friends, look round,
Who will say that our lads are not fair?*

Yes, this was a beautiful hour of the evening! It was particularly so because we had just arrived and everything about us was new.

We just wanted to sit there and study the faces of people—people who had only recently been nomads but had now become machine-builders, electricians and weavers, teachers, actors and engineers—to listen to their voices and suddenly amidst the hum to hear an especially familiar, and especially dear but long, long-forgotten exclamation and to remember with surprise that we had heard it before: yes, but where and when?

With our eyes we followed a little girl who wore over her dress a Kirghiz velvet sleeveless jacket and a round cap trimmed with marten and adorned with the feather of an eagle-owl. A noisy group of students were sitting near us. They had pushed two tables together on the verandah and were deep in an argument

We did not notice the time fly. The crowds gradually thinned out. In the park the orchestra stopped playing and only the rustling of the leaves could be heard. The waiters began to take the cloths off the empty tables. Symphonic music was now coming from the loudspeaker—a rebroadcast of a concert from Moscow. The evening was still young there, but here we were deep in the night: when in Moscow the clock shows 11 p.m., it is two o'clock in the morning in Frunze. The last hurried footfalls died away. It was time to return to the hotel

We walked along the street between the dark silhouettes of the trees and we could hear the beating of our hearts. The beats were so loud not because we had spent a few hours in an aircraft. And not because of the elevation, for Frunze is only seven hundred and fifty metres above sea level. The reason was that we were on the border between great mountains and an unbounded steppe: the temperature changes suddenly, dropping or rising sharply. It takes no more than a day or two to get used to these sudden changes and to stop feeling the weight around the heart.

And so, even at this late hour, as we walked along the deserted street, as flat as the streets of a city in the steppes can be, and saw about us nothing but the walls of houses, the foliage of the trees, and the stars, our hearts told us that we had come to a land of mountains.



Railway Station, Frunze

Government House of the Kirghiz S.S.R.





Kirghiz State University

University Square and student hostel



2. MOUNTAINS

To see the mountains around Frunze at their best you have to get up at dawn and go to one of the small squares, choosing a spot where the trees do not screen the view. From there you will see the mountain range—an ash-grey, jagged ridge, still wrapped in darkness, its teeth biting into the brightening sky.

Sunlight splashes on the snow-capped summits, first painting the teeth, and the chain of bright-pink peaks, purple on the shady side stretch between the mountains and the sky as though emerging from a fog-laden sea. A moment later the sun girdles the peaks with a belt of fire and then runs down the sides of the range, revealing deep ravines with smoky ribbons of rose and purple clouds hovering above them. In the meantime, the summits change from pink to yellow-white, and on the shady side from purple to pale green. Blending fantastically with light and shadow, the colours of the morning sun descend lower and lower to the foot of the range, till they dye the crowns of the trees in the square a flaming scarlet and blaze in the windows of the houses.

Serenely, the sun rises from behind the mountains and at once the colours fade, giving way to even, unblinking daylight. The trees and the houses round the square trace a bright semi-circle against the background of the mountains, which look as though they had drawn nearer to the city. They still wear their rich colours, only these colours are softer as though some painter had redrawn the landscape with gentle crayons instead of oils. When the sun breaks away from the mountains and begins its journey in the heavens, the Kirghiz Alatau retreats again and its colours grow cold. All day, till evening, while the sun moves unhurriedly across the sky above it, the range stands cold, grey, with white-edged summits, stern, majestic, and carved in thousands of deep, wrinkle-like folds.

This picture of the snow-enveloped range has a lot to tell the hearts of the people of Kirghizia. The life of each and every inhabitant of Frunze is bound up with the mountains. Almost every Kirghiz intellectual of the older generation numbers among his most cherished memories such as his wedding day, the day he was decorated with an Order, or the day when his first child was born, the day he came down

into the Chu Valley from the sides of the Tien Shans and rode on horseback, in a covered Dungan waggon or in a dusty car into the city of Frunze, the young capital of his republic. There, at the foot of his native mountains, he received his education, opened his first volume of poems by Alexander Pushkin, and for ever tied up his destiny with the destiny of the great Party that has led the small, indigent Kirghiz people, forgotten in the mountains, out of the darkness of the Middle Ages to the radiant light of a cultured, socialist life.

While we gaze at the mountains, let us talk of our itinerary. Kirghizia is a land of mountains and these mountains will be our landmarks

The mountains of Kirghizia adjoin the deserts and steppes of Kazakhstan, the oases of Uzbekistan and the snow-capped ridges and highland valleys of Tajikistan. The Chinese border, with Sinkiang Province, runs for more than eight hundred kilometres along the crest of the Koksha Alatau in the southeast. The Chinese gave the Tien Shans their name. It means Celestial Mountains, for in the distant past the Chinese thought the tall and forbidding Tien Shans held up the sky

In this land of mountains there are only two big green wedges—the Chu Valley in the north and the Ferghana Valley in the south. Two railway branch lines run to these valleys: one from the Turksib (Turkistan-Siberian Railway) to Frunze in the Chu Valley and on, deep into the Celestial Mountains to Issyk-Kul; the other from the Tashkent Railway to the towns of Osh and Jalal-Abad in the Ferghana Valley. These major towns of the republic are the starting-points of caravan routes fanning out in all directions and of the new and now numerous motor roads

The Kirghiz Republic embraces a huge territory—nearly two hundred thousand square kilometres. But if we were to measure the area where man treads, where flowers grow and snow lies, if we were to measure all the mountain slopes, we would find this territory much bigger. It is better to examine Kirghizia on a relief map.

Kirghizia has hot deserts, steppelands, belts of deciduous and coniferous forests, a “tundra” and an “Arctic” zone, in fact all the dif-

ferent climatic belts of the Soviet Union, all the different flora from the southern cotton to the northern moss and lichens, all the different fauna from the camel to the ermine, and all the different human trades from the camel-driver to the scientist working at a weather station high up in the Tien Shans.

Roughly speaking, our route ascends gradually from 750 metres (the elevation of the city of Frunze) to 7,439 metres above sea level, which is the elevation of Peak Pobeda (Victory), the highest point in Kirghizia. At any elevation of the Tien Shans, life is, of course, linked with the life of the rest of Kirghizia, but at the same time there are features that cannot be found anywhere else. True, it will be impossible to keep strictly to this route, for we shall have to turn off it time and again. The Tien Shans are shaped fancifully and, as in any other mountainous country, the landscape of Kirghizia is colourful and varied. In spite of that we shall do our best to see all of Kirghizia, from the bottom up.

When you go to Kirghizia, you will have to map your own route in accordance with the season. But you must remember that the hottest months, June, July and August—the months that are the hardest on Northerners in Frunze—are the only season when it is relatively easy to reach any of the valleys in the Tien Shans. At any other time, many of the passes are snowed under and cannot be negotiated. In May and September, the air and water are so cold that even in Issyk-Kul bathing is out of the question, and snow-storms have been known to rage in the mountains in mid-summer.

3. CITY OF FRUNZE

In one of the streets of the Kirghiz capital, there is a small house any schoolboy will direct you to. The difference between this and the other old, clay-walled houses in the city is that the whitewash on it is always fresh and there is a memorial plaque on the wall. This small house is where Mikhail Frunze was born and spent his childhood. The visitor passes through a little courtyard with bright flowers, then through a low door—and is transported back to the days when Misha Frunze was a child.

On the whitewashed wall of the tiny hall hangs an iron water-pot with a basin under it and a towel at its side. In the kitchen, which is also tiny, there is a small wash-tub by the clean, whitewashed stove. In this tub, Misha's mother, when she became a widow, laundered the clothes of Pishpek officials to earn the money for the upkeep of her children. In the communicating dining-room, which is so small that there is hardly space to turn round, the table is covered with a simple cloth. The sun shines through the windows, filling the room with a golden light. The atmosphere is so "lived-in," that were it not for the museum cords one might think the owners of these rooms had only just left and would soon be back.

As usual in Asia, the small windows give out on the court, not, we can assume, because the owners liked it that way, but because dust always lay thick on the streets of Pishpek, as the city was called in those days. It would rise in a curtain hiding the other side of the street whenever a britska or a horseman went by.

When Frunze was a boy, Pishpek was one of the outlying towns of the Russian empire, and people who had occasion to describe it found it easier to say what it did not have rather than what it had. It did not have a single factory, school, library or theatre. Water-mains and electricity were unheard of and to reach the nearest railway station people had to travel in a jolting post-chaise for four hundred kilometres.

Properly speaking, it was not really a town but a big market-place overgrown on all sides with white, grey and blue clay-walled houses, the inhabitants of which emptied the slop-pails out of the windows. Street-barbers plied their trade in the mud of the market. The drawn-out moans of camels and the bleating of sheep tied in pairs mingled with the cries of the shopkeepers calling out their wares in the different languages and the buzz of voices in the long queue of petitioners at the porch of the Uyezdz Municipal Council, all of them equally poor and ragged in spite of their different national costumes. And the dust-laden poplars rustled above the clay-walled houses, the Dungan *chaikhanas* and the inns.

At the close of the 19th century, there were four men in Pishpek whom the local "aristocracy"—the tsarist colonial officials, army officers and merchants—described as people "with a screw loose in

their heads." They were: Dr. Poyarkov, who excavated the kurgans around Pishpek and collected Kirghiz folk tales; Fetisov, the town gardener, who grew "unusual" plants in his garden—the mandrake, the walnut, the pomegranate; Svirchevsky, a school-teacher, who translated the works of Alexander Pushkin into the Kirghiz, an activity that the "town fathers" considered not only idle but also dangerous; and, lastly, Vasily Frunze, a Moldavian feldscher (surgeon's assistant), who charged poor folk nothing for his services, and, as though that were not enough, just think of it, gave medical assistance to the Kirghizes to the indignation of the "town fathers."

This attitude to the Kirghiz people, this interest in them, in their life, poetry and national features brought these four men together. In the evenings, they frequently gathered in the small house of the Frunzes, and the children heard them speak of the tsarist officials in angry tones.

The fortunes of the Frunze family changed for the worse with the arrival in Pishpek of Baron von Taube, the Governor of Stepnaya Territory, who came in a carriage-and-three from Verny (as Alma-Ata was called in those days). He flew into a blind rage when he found Kirghizes in the Pishpek hospital. Vasily Frunze was promptly dismissed and the Kirghizes thrown out.

A difficult time began for the Frunze family. The furnishings in the small museum testify to their extreme poverty. The feldscher Frunze became a ledger clerk in a private office and at the same time sowed wheat and grew melons; otherwise he would have been unable to feed his family—his wife and five children. He died soon afterwards and his widow, Mavra, began to take in washing. The heroism of this Russian woman defies description. With the little money she earned at the wash-tub, she brought up the children and, what was most amazing, gave them all, even the girls, an education.

Misha Frunze finished the secondary school in Verny in 1904 with a gold medal. That marked the end of his adolescence and the beginning of his youth, a mature youth that seethed with revolutionary energy. The story of this period of his life is told by the photographs, pictures and documents in the rooms of the neighbouring house, that was once the Pishpek pharmacy but which is now part of the Frunze Museum. Stirring pages from the history of the Bolshevik Party are

inscribed in the leaflets, proclamations and other documents in this museum

In May, 1905, jointly with the weaver Fyodor Afanasyev, Frunze headed the famous Ivanovo-Voznesensk strike. He was twenty years old at the time. In December of that revolutionary year, he led a detachment of Ivanovo workers in the fighting at the barricades in the Presnya District of Moscow. After that he went to Stockholm to attend the Fourth Congress of the Russian Social-Democratic Labour Party. In 1907, he was arrested and thrown into prison with the death sentence hanging over his head. During the trial, his counsel told him he would be pardoned if he repudiated his proletarian convictions. Frunze rejected the man's services. He was sentenced to 10 years' hard labour. He escaped from prison in 1915, going to Minsk where he set up an underground Bolshevik organization in the Army. October 1917 found him again at the head of armed Ivanovo workers, who came to the assistance of the proletarian uprising in Moscow.

The example of compelling personalities ennobles men, inspires them to great feats of labour, to great deeds. For countless people, a visit to the small Frunze Museum turns out to be an important turning-point of their lives. In the museum you involuntarily ask yourself "Am I living right? Have I done all I could to justify the lofty name of Man?" You begin to probe your life, to compare, to sum up all that you have done. The notes in the Visitors' Book show that this feeling is shared by many people.

Each year brings more and more visitors to the Frunze Museum. And as they leave the museum they are seen off, as it were, by a simple, severe statue of Mikhail Frunze rising on a stone pedestal slightly above their heads.

This is a life-size statue of Mikhail Frunze in a Red Army great-coat, his head bared, and a military map in his hands. He is portrayed as he returned to the foothills of his native Tien Shans—a Red Army leader, who had directed the defeat of Kolchak and routed the bands of the whiteguard general Dutov and the Cossack chief Anenkov.

The son of a Pishpek feldscher, who had been dismissed for daring to treat Kirghizes, Mikhail Frunze returned to his distant homeland as the liberator of the Kirghiz, Kazakh and all the other peoples.

of Central Asia. The Soviet Government put him in command of the Turkestan Front and, in addition, appointed him a member of the Commission for Turkestan Affairs. This commission was organized in order to guide the epoch-making work outlined in its appeal to the population of Central Asia. "The aim of Soviet power," it was stated in this appeal, "is to break down the class barriers, to unite all the working people into a single camp in opposition to the camp of the rich; to destroy all forms of national inequality, all forms of national discord, and thus create a truly human society that will be free of brutal egoism and enmity."

Today the Kirghizes, like all the other peoples of the Soviet Union, have created the society Frunze dreamed of—a socialist society that is truly human and free of egoism and enmity. And the grateful Kirghiz people have given the name of Mikhail Frunze to what they are most proud of—to their capital.

4. ON THE ROAD OF CREATION

The name of this city furthermore means "green leaf": that is the translation of the Moldavian word *frunze*. A happy coincidence this, for Frunze is one of the most verdant cities in the Soviet Union.

A hundred years ago, the Chu Valley was, as travellers liked to write, "a dismal, sun-scorched steppe" with not a tree for a traveller to rest his eyes on or for a singing bird to weave its nest. Shelter from the broiling sun was found only in the shadow of the round yurtas. Besides yurtas, there were solitary, flat-roofed clay houses, and where the Kirghiz capital is now situated there towered the clay walls of the Fortress of Kokand.

When Russian settlers appeared in the Chu Valley, they planted Lombardy poplars, elms and maples in the streets of their villages; cherry-trees began to blossom in the gardens round the cottages of the Ukrainians. At first the trees were few in number, and when carts rumbled past, raising clouds of dust, it was sometimes impossible to make them out in the grey-yellow steppe. But people were already finding shade and coolness beneath them, and singing birds began to weave nests on their branches.

Late in the eighteen seventies a man came to Pishpek who spared no effort to plant trees in the town. This was the gardener Fetisov, the friend of the feldscher Frunze. Besides his own garden of "unusual trees," he laid out the Elm Grove on the outskirts of the town in 1881.

In pre-revolutionary Pishpek, Fetisov was regarded as a crank. In modern Frunze, all the residents—Kirghizes and Russians, from Young Pioneers to people of a venerable age—are "cranks" like him. "If you don't sow shade, you won't have a cool place to sleep in," is a favourite saying of the people of the Kirghiz capital. They have sown an abundance of shade in their city, transforming it into a veritable park. To this they are adding nearly a quarter of a million trees and shrubs every year.

The scientific centre of this work is the Kirghiz Academy of Sciences' Botanical Gardens on the outskirts of the city. The Kirghiz botanists order seeds and saplings from other areas in order to acclimatize them to local conditions and give them a new home. The newcomers to the Botanical Gardens include the box-tree, the Siberian larch, the paliurus, the black alder, the rock current, the black elder and the Betstein poplar, which added three metres to its height in a single year. There is, of course, a section devoted to Kirghiz flora, where botanists are experimenting with trees and shrubs from the Tien Shans—the saddle-tree, the Susamyr currant and the graceful Tien Shan spruce.

The Botanical Gardens also have a Michurin section. The Pishpek orchards were famous for their apples, pears, peaches, plums, cherries and apricots even before the Revolution, but where there were only a few varieties of these fruits there are now scores. Besides, pomegranates and dates now grow there. Quite recently, it was believed that good varieties of vine would not grow in the Chu Valley because of the spring frosts. The Michurinists have upset this belief, and in the autumn heavy bunches of luscious grapes hang in the shade of the awnings in the markets of Frunze. Moreover, Frunze now has its own distillery. Kirghizia is especially noted for its champagnes: champagne grapes have found unusually favourable soil and climatic conditions in the Chu Valley. In this respect, the valley has few rivals in the Soviet Union.

What a long road has been traversed from Fetisov, the gardener who experimented on his own, to the Kirghiz Academy of Sciences with its numerous staff of scientists!

I have struck up friendships with many intellectuals in Frunze, friendships that are real and lasting in spite of the long distance that now separates us. One of my friends, a young scientist, heatedly exclaimed in answer to a critic, who accused him of being partial in his literary tastes: "Impartiality in art is the same as discretion in love, which is the lot of cold hearts!" There was another Kirghiz scientist, who, in conversation with a friend, said passionately: "You have grown used to regarding the level science has reached today as eternal and the last word as final. Nothing can be worse than fossilized knowledge. Look ahead of you, ahead!"

I remember the very atmosphere of my conversations with these people, who only half an hour before had torn themselves away from microscopes or desks, who had come from silent laboratories or from noisy institutes—the atmosphere of ideas that were at once captivating, gladdening, gay, witty, proud, all-conquering, vivid and brilliant. I cannot help remembering that the life of almost every Kirghiz intellectual of the older generation began not with the primer but with the staff of a boy-shepherd and a raw-hide whip called the *kamchi*.

When most of them recall their childhood, they speak of a dilapidated yurt, the smell of wet felt, their mother spending hours starting a fire, the smoke stinging her eyes, and their father warming his hands over the fire and drying his torn boots.

"We knew," Aitkul Ubukeyev recalls, "that we would have to be shepherds, to work for the *bais*. There was nothing else for us in life. When I still should have been playing, my father called me and said I was grown-up and would have to earn my own keep by tending the *bai*'s sheep.

"*Jarma* (a barley soup) was about the only food we ever ate in our family. We only had a hazy idea of what a *tokoch* (flat cake) was. On very rare occasions, in fact I can count them on my fingers, my mother treated us to cakes baked in ash. But I don't remember ever eating all I wanted. I dreamed of having a real meal just once.

"In winter, we stopped playing in the open air. many of us had no boots. We'd sit around the fire-place, feeling hungry and low. Sometimes we'd play knucklebones. When we were fed up with that, we'd put our feet into the warm ash in the fire-place or get a cooled piece of charcoal and paint our hands with soot and play *moldo*, a game whose object was to smear your opponent's face with soot"

No more than thirty years ago, when somebody left his native mountain aul and his relatives urgently wanted to get in touch with him, they had to search the whole Chu Valley for somebody to write a letter for them. When they did find somebody who knew the "magic art" of writing, it would invariably be a person who did not write in their native language, but in the language of one of the neighbouring peoples. The Kirghizes did not have a written language of their own. As the poet Aaly Tokombayev so aptly put it, "it was as hard to find a literate person in the Kirghiz mountains in those days as it is to find an illiterate person there today."

It is significant that this was said at the opening of the Kirghiz State University. A cultural revolution has taken place in Kirghizia. A written language was only evolved in 1924, but by 1940 there were more secondary schools in Kirghizia than in the rural localities of the whole of tsarist Russia. Universal seven-year education has been introduced in the Kirghiz countryside and ten-year education in the towns. Every fourth person in the republic is studying.

Every Kirghiz intellectual of the older generation has lived through many interesting events and extraordinary changes of fortune.

During the Kirghiz uprising of 1916,^{*} the poet Aaly Tokombayev was a boy. His family fled to China, where of the whole family he alone survived. On his return to the Tien Shans in the stream of refugees, Aaly was a homeless waif and later became a shepherd. He drove his flock to Tashkent where he entered the Central Asian Communist University. At this University his studies began with the alphabet. Later, he studied at the Institute of Literature in Moscow.

The Central Asian Communist University was named after Lenin. "I imagined Lenin to be like one of the giants in a fairy-tale, like a warrior in a folk epos, who could make short work of thousands of

* An account of this uprising is given on p. 61.

enemies single-handed," Tokombayev relates "When Lenin fell ill, we began to look for medicinal herbs. The Kirghiz people use various herbs as medicine. We decided to find such herbs and send them to Lenin. I wrote to a friend of mine, Sadyk, who was a shepherd, begging him to send the herbs to me as quickly as possible. Sadyk was illiterate, but I hoped one of his relatives, a school-teacher, would read the letter and we would help Lenin to recover."

Like almost all the Kirghizes of his generation, Tokombayev cannot tell the exact date of his birth. But the whole Kirghiz people know the exact date when Kirghiz literature was born: the first issue of the Kirghiz newspaper *Erkin-toh* (*Free Mountains*), which carried a poem by Tokombayev dedicated to Lenin, was printed on November 7, 1924. Many poems and novels by Aaly Tokombayev have been published since then. His books have been translated into many languages, and the Kirghiz Government has conferred upon him the title of People's Poet.

The painter Gapar Aitiyev, whose pictures hang in the Kirghiz National Gallery, modelled a sculpture which he called *The Tale of the Seven-Headed Witch* when he was thirteen. The village mullah smashed this sculpture and declared the boy an apostate. Later Aitiyev worked in Komsomol organizations. He became the editor of the republican Young Pioneer newspaper, and then a student at the Moscow Art School. In 1939, he won nation-wide recognition for his sets for *Altin-kyz*, a musical drama staged during the Kirghiz Art Festival in Moscow. Today, Aitiyev is the leading painter in the republic, the teacher of young painters and a deputy to the Supreme Soviet of Kirghizia.

The surgeon Isa Akhunbayev spent his childhood in a little village on the shores of the blue Issyk-Kul. Like all the Kirghizes in those years, the boy thought disease was the work of jinns, tiny creatures, which, like human beings, rode on horseback and were nomads, and showed themselves to people in the shape of flies, lizards, toads and spiders. He got over this superstition at school. After leaving school, he studied at the Medical Institute in Tashkent and today he is a well-known surgeon, President of the Kirghiz Academy of Sciences, and the author of treatises on endemic goitre. He has saved thousands of lives. The people elected him a member of the U.S.S.R. Peace

Committee and he shared in the work of the Second World Peace Congress in Warsaw.

The historian Begimaly Jamgirchinov was born in 1914 in the shabby yurt of a *bai's* shepherd at the foot of the mountains in the Chu Valley. His father, Jamgirchi, was so poor that he was thirty-two before he had the bride-money necessary to get married. The youth of the son can in no way be compared with the youth of the father. Begimaly grew up together with the culture of his people: an agricultural school was opened in Frunze by the time he finished a village elementary school; the year he left this school a pedagogical institute was founded in Frunze; a graduate of this institute, the young Kirghiz scientist received his Doctor's Degree for a thesis entitled *The Unification of Northern Kirghizia with Russia*, which convincingly showed the progressive role that Russian culture played in his country.

When the pedagogical institute was transformed into the Kirghiz State University, Begimaly Jamgirchinov became its first rector. Now he conducts a history course at the University.

The Russian scientists academicians L. S. Berg, V. V. Bartold, A. E. Fersman, V. L. Komarov, A. N. Bach, K. I. Skryabin and A. A. Borisyak and other Russian teachers who came to work in Frunze helped the Kirghiz people to find a foothold in science. The Academy of Sciences of the Kirghiz S.S.R. now directs the work of many research institutes and experimental centres whose staffs include quite a number of Kirghiz scientists.

In this chapter we will not acquaint the reader with the work of Kirghiz scientists because in our journey across the republic we shall frequently meet them, not in their studies but in the thick of life and that is, of course, much more interesting.

5. "THEY HAVE BUILT, THEY ARE BUILDING. . ."

"They have built. . . They are building. They are planning to build" are phrases that we frequently hear in Frunze. Find a Frunze worker who is a deputy to the City or Regional Soviet and ask him to show you round the city. You can, of course, look round for yourself.

You will see new buildings, community centres and parks, but you will miss a lot of the poetry and the grandeur of construction. It is different when a deputy is your guide.

In the Soviet Union, large-scale construction has long ago eliminated provincialism, and transformed the people working on the projects into front-rankers no matter where they live.

In this respect it would be appropriate to call to mind the words of the writer Dmitry Furmanov, who was commissar in the famous Chapayev Division.* When Furmanov passed through Frunze (it was still called Pishpek) in 1920, he spoke at a rally of the people and Red Army men and later wrote: "... I could see that things which workers in Samara, Ufa and elsewhere take for granted are new here and that the people show an interest in them as though they were fresh news. These people of the towns and villages nestling against the Tien Shan Mountains are living in the distant, very distant past."

As of old, the mountains tower above the Kirghiz capital. But since Furmanov's day the city has changed as much as the people living in it have changed

New buildings have risen above the motley sea of tiny houses. Some of them are adorned with rosettes in the national Kirghiz style. The pavements and roadways have been coated with asphalt. Frunze has developed into a real city with all of a city's features—water-mains and hospitals, stadiums, garages, filling stations, trolley-buses, buses, the glazed boxes of the traffic militia, and streams of trucks and cars.

Frunze's new centre is formed by two big buildings situated opposite each other in a square—Government House and the Academy of Sciences. The cultural establishments are in the residential districts and they form a huge circle round the centre. These establishments

* A Red Army division commanded by Vasily Chapayev, a self-taught Army leader of peasant origin who became a hero of the Civil War. In the spring and autumn of 1919, this division inflicted a series of defeats on the troops led by Kolchak

Chapayev and his division are described by Dmitry Furmanov in *Chapayev* (Foreign Languages Publishing House, Moscow, 1955).

include the Kirghiz University, the medical, agricultural and polytechnical institutes, the Picture Gallery, the Museum of History, the State Philharmonic Society, the Young Pioneer Palace, the editorial offices of Russian and Kirghiz language newspapers, and the State Publishing House which prints magazines and books in the Kirghiz and Russian languages. This list could be considerably lengthened by mentioning many other institutions such as can be found in any big Soviet town. But here it would be more interesting to speak of something else.

In the Oak Gardens in Frunze there is a small, plain old building, which was once the opera theatre. How smart this building seemed (this will be certified with all sincerity by many Frunzians) to the people in those still freshly-remembered days, when it was the first and only theatre in the history of the Kirghiz people. Compared with the clay-walled houses, the theatre was not only unusually handsome but simply majestic.

That was not very long ago, but today the Kirghiz capital has several other theatres, twenty-four clubs and five parks with summer theatres and stages for variety shows. As the years went by, the people of Frunze gazed at their new (they were already beginning to call it the "old") opera theatre with growing condescension: the building remained unaltered but the attitude towards it changed. The opera company and the spectators began to find the theatre too small. The people "grew out" of this building just as a child grows out of its clothes. Little wonder then that the city built a big new opera theatre with a magnificent auditorium, where the only thing that one can, perhaps, object to is the somewhat extravagant gold ornamentation. The old building was turned over to the Russian Dramatic Theatre.

In 1934, the Chernyshevsky Public Library in Frunze had only thirty-four Kirghiz readers. Those were the library's prehistoric days! Now the library has tens of thousands of Kirghiz readers even though there are eighty-four other libraries in the city. Books have invaded the home of every Kirghiz family. The public library is now too small for the readers and for the books, and the need for a new building is now keenly felt. The situation is the same everywhere else.

Prior to the Revolution, the Kirghiz people had a semi-natural

economy. There was no industry. Even the household utensils were bought chiefly from the neighbouring Uzbeks, Dungan and Russians. The Kirghizes were among the most backward peoples of Asia. Here is what the tsarist general Gasford wrote: "Like this they are useful to us and harmless. They like their way of life, think it is the best there is, believe themselves happy and wish for nothing better. In my opinion, to deprive them of this happiness by giving them new ideas and requirements would be not only unjust but also unprofitable." Unprofitable! Yes, for the tsarist officials, industrialists and merchants and for the Kirghiz *manaps* and *bais* it was profitable to preserve a semi-natural economy in the Tien Shans and to keep the Kirghiz people in darkness and ignorance in order to be able to rob them with impunity.

The Kirghiz workers of the older generation will tell you that when they were children nobody ever stroked their heads with hands smelling of machine-oil: there were no hereditary workers in Frunze. Quite by chance I came across the biography of a Kirghiz shop foreman. It began with the words: "Until 1920 I had no idea what classes and the class struggle were. . . ." Prior to the Revolution, most Kirghizes did not know what classes were and they did not realize that their struggle against the *bais* and *manaps* was a class struggle. They did not have the revolutionary class upon whose shoulders devolved the great mission of liberating mankind from exploitation. Today, Kirghizia has its own working class.

The hands of the men that wielded the shepherd's whip and the hands of the women that sewed a fox's tail to a cradle to drive away the devil are today making fine woollen fabrics, knitted garments, footwear, farming machines, oil engines, medicines and many other things. The Kirghiz people now have their own hereditary weavers, miners and machine-builders. Russian workers helped the Kirghizes to put an end to their age-old backwardness and to enter the family of Soviet peoples as equals. By an odd coincidence they were also helped by Czechs. Yes, by Czechs and Slovaks!

In 1924, the West was shaken by an economic crisis. Factories and plants were closing down and the labour exchanges were crowded with people seeking employment. A large group of Czechoslovak workers—weavers, brick-layers, tanners, joiners—decided to emi-

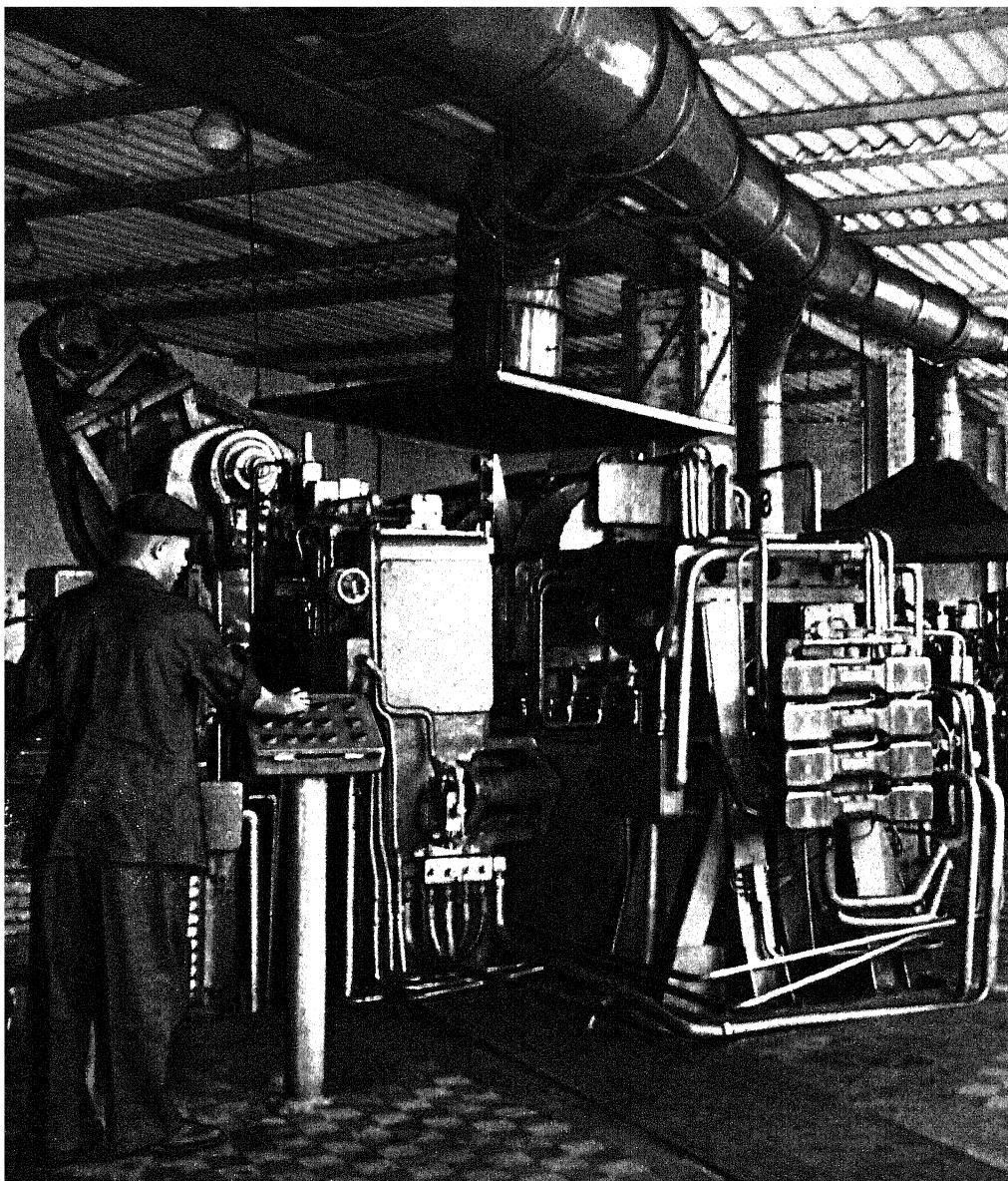
grate to the Soviet Union with their families. In Kirghizia, they founded the famous Intergel'po (Mutual-Aid) Producers' Commune, which developed into the first school for the Kirghiz workers. Julius Fučík dedicated his book about the Soviet Union to them, to "the comrades from the Intergel'po Commune." He began a novel about them but the war and his tragic death cut short his work.

This commune's small enterprises gradually expanded into large factories and plants. Like many of the veteran Russian workers, almost every Czechoslovak living in Frunze to this day (and there are quite a few of them) has his own pupils. Vojtěch Kusík, shift foreman of the spinning department at the broadcloth factory in Frunze, once said. "Try and draw a diagram of Kirghizia's industrial growth; you will find that you will have to draw a multi-storied house beside a match-box." He is quite right.

This does not mean Kirghizia has become a super-industrialized country. The comparison between a match-box and a multi-storied house was given in the sense that they are incommensurable: it is impossible to draw them on one and the same scale. V. F. Pavlenko, an expert on Kirghiz economy, calculated that in 1953 every two days' industrial output was much greater than the annual output of the entire pre-revolutionary domestic industry. Kirghizia's industrial development continues to forge ahead.

We have already said that there were no hereditary workers in Kirghizia. Let us add to this that the overwhelming majority of Kirghiz families do not have wardrobes, tables or chests of drawers that can be described as heirlooms. In his yurt, the Kirghiz nomad sat on a piece of felt spread on the ground. When the Kirghiz people bade farewell to their nomadic life, the family of every worker, collective farmer and intellectual found itself needing furniture, and plenty of it at that. The old cooper's workshop in Frunze was converted into a furniture factory.

In pre-revolutionary Kirghizia people used to say that a rich man leaves *salyk* (property) and a poor man *charyk* (shepherd's raw-hide boots). Today, every Kirghiz has *salyk* and will not even so much as look at *charyk*. Go round the workers' districts of the city and you will see for yourself that the workers of the Frunze factories and plants will leave their children well-furnished, comfortable homes,



Agricultural machine works, Frunze



Main building of the Kirghiz Academy of Sciences

Lenin Street, Frunze



private libraries, expensive wireless and TV sets and many other things. But the main inheritance their children will receive is faith in man's creative genius, in his strength. Let us for a moment dwell on this priceless heritage

A few years ago, when I watched Ainek Aitkulova enter her shop at the Komsomol Sewing Mill and take over and examine her loom, I found myself recalling the lines of a Kirghiz legend: "A beautiful maiden came out of her yurta in the darkness of night. She looked to the right of her and all the sheep on that side could be counted in the light of her gaze. She looked to the left, and all the women and girls on that side, thinking that dawn was breaking, got up and set to work." These words express the people's faith in the great creative strength of man. The Socialist Revolution gave scope to the development of this strength and an example of this is the life of the seamstress Ainek Aitkulova.

As a child she lived in the mountains, where flocks of sheep grazed in the meadows, and a river, its blue waters covered with white, silky foam, splashed over stones, singing its unceasing song. She reached girlhood ignorant, illiterate, steeped in superstition and unconscious of her abilities. Such was Ainek when she came to the city to work in the sewing mill.

Several years passed, but it is doubtful if many people noticed any striking change in Ainek: she did her job, mastering her trade with the usual little setbacks and triumphs. It was all so ordinary that when one day Ainek suddenly plunged into an argument with the foreman over technicalities, the old workers were surprised: where and when had that inward change, which had freed her so completely from her past, taken place in the girl? Without noticing it, together with her people, Ainek, daughter of one of the most backward nations, came abreast of modern civilization and stood shoulder to shoulder, or, as the Kirghizes say, stirrup to stirrup, with all the peoples building communism.

At her mill, Ainek introduced the work methods of production innovators, teaching more than a hundred seamstresses. When I met her, she was a deputy to the Supreme Soviet of the Kirghiz Republic. "Where does she find the time?" I asked the superintendent of her

department at the sewing mill. He replied simply, with a conviction backed by long years of experience:

"He who does much has plenty of free time. Idlers are the only people who never find time to spare."

In work, rhythm is a matter of great, one might say, crucial importance. But there are other aspects that also count.

While on a visit to one of Frunze's vocational schools I saw some of the new pupils, dressed in the usual black uniforms, crowding round a turning lathe. One of them, a lad of thirteen, with close-cropped hair and prominent cheek-bones, was patiently learning to operate the lathe. Good nature was written all over his face and it was only deep in his slanting eyes that an attentive glance could catch a spark of despair. The shavings were uneven and the parts he was making turned out to be defective

The foreman watching the lad suddenly turned to one of the senior pupils, who was confidently operating the neighbouring lathe.

"Why is he bungling it?"

"Because he hasn't heard about 'phoo,'" the boy replied, eyes flashing.

"'Phoo?' What is it?" the other boys asked in bewilderment.

"The chief thing in work," the foreman said gravely. "It was the secret of a famous potter, who lived a long, long time ago. He baked vessels over a fire, and when finished they were clean and blue like the sky. Nobody, not even his favourite pupil, knew how he did it. One day, this pupil decided he had learned everything and left his teacher. He began to bake vessels himself. But when finished they were chipped and grey like the soil. He went to his teacher and tearfully asked for advice. 'I did everything as you taught me, but it all comes to nothing.' 'What about phoo?' the potter asked. 'What do you mean?' 'This is what I mean. Before putting a vessel over a fire, you must do this. . . .'" The foreman took the cap off one of the pupils and bringing it to his mouth blew on it as on a vessel: "Phoo! The dust had to be blown off the vessel, but the pupil did not know that."

Every trade has its own "phoo," its own technical finesse, which cannot be mastered at once. In Frunze, as everywhere else in the Soviet Union, the workers are studying in their spare time. In every factory there are posters announcing classes offering the required mini-

mum of technical knowledge, political studies, and practice in the work methods of innovators. Study is what gives the factories and plants of the Kirghiz capital their most vivid and unforgettable features.

6. TEKME

When the *akyn* Alymkul Usenbayev, the patriarch of the Kirghiz bards, goes over from a gay to a sad song, he retunes his *komuz*. The *komuz*, a popular Kirghiz musical instrument, is rather like the Russian balalaika. Like the bard, let us retune our *komuz* and first say a few words about what aches.

An episode from the life of Alymkul Usenbayev is related by the poet Victor Vinnikov, who lived for several years in Kirghizia.

"Many years ago, when the *Basmachi* came to Talass, the local *bais* and *manaps* decided to welcome them with honour and present them with three gifts. the best horse, the best hunting falcon, and the best *akyn*—Alymkul Usenbayev"

"That was the first time in my life," Alymkul later related, "that I regretted learning to compose songs. It was also the first time in my life that I realized nothing was too good for the people. I gave the people my songs and in return they saved my life. They hid me in the mountains and the *Basmachi* did not get their third gift."

Singers were needed by the rich men only to sing their praises or to announce the sale of livestock. The *akyns* who gave voice to the thoughts and feelings of the people and spearheaded their *kordohs*, songs telling of indignities that had been suffered, against the feudal lords and *bais*, lived a life full of incredible hardship.

The Kirghizes have a mass folk game called *sarmerden*, in which each of the players must improvise a song. Almost every Kirghiz can improvise songs, an art that has been handed down from father to son for countless generations. The best improvisers became professional singers. A newcomer is often surprised to find *akyns* everywhere—in the pastures, at the factories, on the stage of a theatre, in a collective-farm field camp—and to hear him singing about the work of a dairy-maid sitting right there in front of him, about a horse-herd who has failed to protect the foals against *tütek*, a mountain

disease, about the heroic life and death of Ernst Thälmann, about the Rembrandt jubilee, about the first Soviet sputniks, about everything on earth.

The *akyns* play an exceptionally important role in the life of the Kirghiz people. After the Revolution, the most prominent of them united in a philharmonic society. Make a point of going to the Kirghiz State Philharmonic Society when an *aitysh*, a contest between the leading *akyns* of Kirghizia, Osmonkul Bülebalayev and Alymkul Usenbayev, is announced. It will be an evening you will long remember even if you do not know the Kirghiz language.

In tall caps with a velvet top edged with the reddish-brown fur of the Tien Shan marten, with broad, silver-bound belts round their waists, the *akyns* sit on stools, with one leg over the other, leaning slightly on the knee with the hand holding the *komuz*. The audience give them most of the themes for their songs. In turn they lift the *komuz*, run their fingers over the strings and begin to play a somewhat monotonous but characteristic rhythm, which is full of inward fire. This and the high-pitched "*Eiei!*" with which the *akyn* begins his lines, raises the tension of the song and thrills the listener.

Actually, this is not a song but rather an energetic, rhythmically organized recitative that allows every word to reach the listener. From the European point of view, the art of the *akyn* is closer to that of the reciter than the singer. But our reciters do not attain such a tense rhythm.

When the other *akyn* gets his turn, he jokes at the expense of his rival, ridicules the images given in his songs, speaks ironically of his skill and at the same time continues the theme. As the *akyns* take over from one another, the audience (at these contests, the theatre is always packed) responds with enthusiastic cries and laughter to a witty word, an inspired line, an ingenious image or a piece of caustic sarcasm; all the listeners participate in the contest and that too is a feature of the Kirghiz *aitysh*.

Tekmé is what the Kirghiz people call Alymkul Usenbayev. This word is almost untranslatable. It means that the song of the *akyn* flows as freely as the waters of a spring. Properly speaking, this short word may be applied to everything in art that is really inspired, comes from the heart and flows as freely as limpid water.

Lessons at a choreographic school





Children's music school

While we are on the subject of Kirghiz art, I should like to use this word to describe two *yrchis*, who frequently perform on the stage of the Philharmonic Society. They are Myskal Umurkanova and Asek Jumabayev. *Yrchis* are singers of lyrical and humorous folk songs and they too sing to the accompaniment of the *komuz*. Asek Jumabayev, however, a very young man who received his training in the Soviet Army, sometimes sings to the accompaniment of an accordion as well. Kirghiz songs captivate the listener not only because the melodies are lovely but also because of the manner in which they are sung, a manner which acts strongly on the imagination.

On a proposal moved by the French delegation at the World Youth Festival in Warsaw, Asek Jumabayev was awarded the first prize by a unanimous decision. His performance evoked general admiration, particularly a humorous song of his own composition entitled *Komuzum*, in which the singer "talks" to his *komuz*. Still, if I had to choose between Asek Jumabayev and Myskal Umurkanova, I could not say who is better. Myskal's low, melodious and at the same time strong voice conquers the listener, calms and refreshes the blood.

Asek was a pupil of the famous Musa Bayetov, whose recorded voice rings out more than any other singer's at parties to this day. The recordings made in his lifetime still sell like hot cakes. Equally popular are the records of the late Atai Ogonbayev, a remarkable folk musician who wrote some wonderful lyrical songs. The life of Atai Ogonbayev again transports us to the pre-revolutionary past.

Atai became an orphan at the age of six and began to look after the local *bai*'s lambs. At nine he was a full-fledged shepherd. His master forbade the *chabans* to sing. "While the shepherd sings," he said, "the wolf carries off a sheep." Atai used to drive his flock as high up into the mountains as possible so that the *bai* would not hear his songs. One day, he was caught in a landslide and both his legs were broken. Kind people gave the boy refuge in their poor *yurta*. Atai was bedridden for two years, but in that time he learned to play the *komuz* so well that when he recovered he left the *yurta* as a well-known musician.

Go to the Philharmonic Society to listen to Atai Ogonbayev's pupils—Kulboldiyev, Tininbekov, Asanov and Kojebekov. Their skilful performance on the *komuz* will provide you with fresh delight, with

fresh effects. To a person hearing them for the first time, the notes of a *komuz* sound as though they are muffled. But it is this muffled delicacy that brings them close to soft human speech and emphasizes the clear sound of the strings, which are not played in the ordinary way. This sound is especially prized by music lovers. To achieve it, the body and neck of the *komuz* are made of elm and the finger board of Tien Shan spruce. It is said that to achieve an especially delicate sound, the old *komuz*-makers used to put 40 reeds into the sound cavity.

At the Philharmonic Society you can also hear the *temur-komuz*, a tiny musical instrument shaped as a horseshoe. This is a purely Kirghiz instrument. It is played with the lips and the notes are entrancing. You can also hear the Kirghiz tambourine, which has a characteristic timbre, and lastly, the *kiyak*, the Kirghiz fiddle.

Like other Eastern fiddles, the *kiyak* is held vertically on the knee with the strings facing the listeners, and the bow is played horizontally on the strings. The best *kuus* (musical plays) for the *kiyak*, which have become classics in their own right, were composed by Muratali Kurenkeyev, a remarkable folk musician, who, it can be said, was also a *tekmé*.

Among the Kirghiz *kuus* there is a play entitled *Kambarkan*, which tells of a legendary hunter called Kambar. The tale is that there was a time when people had never heard about music. But Kambar took the guts of a ram and stretched them over a piece of hollow wood. When the mountain wind began to blow, the strings quivered, rang out and sang. Thus was born the first stringed instrument. Then Kambar made a *chohr* (shepherd's pipe) from a hollow reed and fitted a gold ring into each of the tiny holes. The mountain wind poured into the little gold holes and began to sing. The flute was thus born. The music captivated everybody—people and birds, the deer and the snow leopard. The donkey alone did not like it. When the donkey died, Kambar took its skin, stretched it over the donkey's empty head and struck it. The sound made the deer and the snow leopard, the birds and all the people jump with surprise. Thus were born the tambourine and dances.

The memory of how and when stringed, wind and percussion instruments appeared among the peoples of the world has been lost deep

in the ages. But the story of how dances and acting were born among the Kirghiz people is full of such interesting details that beside them the legend about Kambar fades.

The Kirghiz Studio of Music and Dramatics was opened in the autumn of 1926. Most of the students came from the distant villages in the mountains. At the first lesson, when the teacher began to play the piano they were so amazed that they could concentrate on nothing else all that day. They kept coming up to the piano and striking the keys. Comparing the piano with the *komuz*, they could not get over their surprise at hearing the powerful notes. Several days later a similar sensation was caused by a box of make-up.

The simple plays in the Kirghiz language that the students staged in the beginning made a tremendous impression on the people. Otunchu Sarbagishev, who later became a producer and playwright of the Kirghiz National Theatre, vividly remembers how a troupe from the studio came to his native Jungala Valley: "I was so carried away by the plays, that I got the manager to take me on as a carter and it was a good thing I had a horse. I drove them about the district, helped to set up the scenery and hang the curtains, and when the play started I would rush into the hall, sit down in the first row, and watch the same play over and over again with bated breath. . . ."

After Kasymaly Yeshimbekov, who subsequently became a well-known actor, saw his first play, he made whiskers and a beard from a goatskin, drew wrinkles on his cheek with coal and turned his coat inside out so that the fur would show. Arrayed in this fashion, he went to his yurt and imitated a senile voice so well that in the semi-darkness many of the inmates took him for an old man. Later, like Sarbagishev, he entered the theatrical studio in Frunze.

He lived the first winter in Frunze with a fellow-student, Ashiraly Botaliyev (who also became an actor), in a yurt on the outskirts of the city. Returning to the yurt after classes, they would light a fire and, covering their knees with the hem of a sheepskin, memorize their lines. When the fire would die down, they would fall asleep, shivering and pulling their sheepskin coats closer about them. In the morning, they would be back at the studio.

In those years the Kirghiz theatre was in its infancy. The fruit and pepper for the stage were bought in the market. "We had no cos-

tumes," Yeshimbekov recalls. "Frequently, we borrowed national costumes from people who'd come to the market from the villages, giving them free tickets in return." And how naive were the professional problems worrying the actors! At one of the meetings in those years, actress Anvar Kuttubayeva said: "I do not find it hard or shameful to play dramatic roles: yearning for happiness that has been lost or wrath at being made to marry somebody you don't love. But I am ashamed to convey coquetry or love. I always feel that the spectator might believe I am light-minded and dissolute in life and condemn me."

The Kirghiz theatre constantly toured the villages in those days and this practice is being continued today. Amankul Kuttubayev, who is now a producer and director of the Kirghiz Opera and Ballet Theatre, recalls that the actors played without paying attention to the whistles and catcalls of the *bais* and mullahs and that after a play they would wipe off their make-up, change into work clothes and go out into the fields to help pick cotton or dig *ariks* (irrigation ditches). Kasimaly Yeshimbekov told me that quite often as payment for a night's lodging the actors had to clean the cattle-shed or do odd chores about the household.

In the thirty years that have passed since its birth, the Kirghiz theatre has become really professional. Take the Kirghiz Dramatic Theatre. It now has its own repertoire that has been created by Sarbagishev, Abdumomunov, Shukurbekov, Jantoshev and other Kirghiz playwrights. It also stages plays of other Soviet peoples and works by European classics translated into the Kirghiz language.

Go to the Kirghiz State Opera and Ballet Theatre and you will be really delighted by what you will see. Let me repeat, "see" and not "hear." The Kirghiz opera has not been lucky as regards composers. Buy a ticket for *Aichurek* which is the first and the best Kirghiz opera. It was first produced in the late thirties and several other operas have been written after it, but it alone holds a firm place in the theatre's repertoire.

Let us take our seats in the hall. There is a beautiful, carved portal round the stage and on it, between fairyland boulders and trees, are portrayed flying, jumping and crawling beasts and birds. The shadows of what look like live bats flit noiselessly past the footlights.

The overture breaks the silence. The sounds of Kirghiz folk instruments mingle with the singing voice of the flute and the calls of the bassoon and the oboe, imparting unique colour to the music, which, in the beginning, is pleasant to hear.

But soon, very soon the music begins to pall. You wonder why. Perhaps because there is more majesty and grandeur in the music than grace and elegance? Or... The singers appear on the stage and everything becomes crystal clear: the composers failed to understand the Kirghiz folk melodies, to appreciate them, did not believe in them and began to readjust them, to "improve" but actually to change, drown and destroy them through orchestration.

Melodies are what give music its charm. That is the case with the best operas of the Kirghizes' neighbours. Many lovely Kazakh and Uzbek melodies have become popular throughout the Soviet Union thanks to the new operas. The Kirghiz operas, too, contain many wonderful folk melodies but when you listen to the opera you find they have been changed so much that you can hardly recognize them. The Kirghiz operas have yet another big shortcoming: the parts are, as a rule, devoid of passion. Circumspection kills the music, prevents the listeners from enjoying it.

I have purposely refrained from mentioning the names of the composers who came from the central part of the Soviet Union to help the Kirghiz people create their own opera, because they have done all in their power. They composed several operas and wrote the first choral and ensemble music in the history of Kirghizia. The orchestral palette of Kirghiz musical art has become richer through the introduction of European instruments; Kirghiz operatic actors have been trained by them. In short, the Kirghiz opera owes much to these people and it was no fault of theirs if they fell short of becoming *tekmés*. Kirghiz composers have in recent years been writing operas but they have not produced anything that could be called an event in the country's musical life.

But where the composers failed, the decorators have succeeded. In this sphere, the Kirghiz theatre has practically no rival. Every production at the opera theatre takes one's breath away. It is a real feast of colours. The *décors* for the first Kirghiz operas were designed by Y. Z. Stofer, who was a leading Soviet theatrical artist. When he died,

his place was taken by A. V. Arefyev, a self-taught artist of unique, natural gifts, who was a house-painter at the theatre. The *décors* and costumes designed by these artists provide you with an unending stream of impressions and quicken your interest in the action.

The work of these artists shows itself to its best advantage in the ballet, because the ballet is chiefly a spectacle in which music only forms the background. Another reason for this is that Kirghizia has splendid ballerinas. Some of them—Beishenaliyeva, Jamanova and Melentyeva—rank among the leading ballerinas in the country. The best Kirghiz ballets are *Anar* and *Cholpon*.

It is interesting to note that prior to the Revolution, the Kirghiz people did not have their own dances. Dances were mentioned only in legends and epic poems. The first Kirghiz dances were devised by choreographer N. S. Kholfin, who has every right to be called the creator of the Kirghiz national dance. And from the theatre, dances passed to the people.

I should like to tell a story from the life of a Kirghiz ballerina, which shows the difficulties that a new art encounters.

She was still a little girl when she was sent to study in a ballet school in Leningrad. She grew up in Leningrad and because of that the old Kirghiz customs found no response in her psychology. So far as she was concerned, they simply did not exist. She returned to Frunze and began to dance in the ballet. Some time later, she fell in love with a young Kirghiz intellectual and married him. A son was born. In a word, she was happy. And to make her happiness fuller, she invited her husband's relatives to the theatre to see her dance.

They came from their mountain village in several trucks. There were about forty of them. They solemnly took their seats. This happened in the old building of the opera theatre in the Oak Gardens. The *aksakals* (family elders) sat importantly in the first row. The edge of the curtain fluttered slightly in the evening breeze coming from the open traps in the ceiling. The strains of the overture died away. The curtain was rung up and the ballerina flitted out onto the stage. That day, as ill luck would have it, she was dancing not in a

Kirghiz but in a classical ballet and was wearing tutu. What happened next came as a complete surprise both to her and to her husband.

The *aksakals* exchanged glances and rose from their seats. The rest of the relatives followed them, filling the passage. The *aksakals* had been prepared for everything but not the sight of their boy's wife shamelessly appearing in public with naked legs and arms. They went back to their trucks and drove away. This incident shook the ballerina's life to its very foundations.

In spite of the indignation of her husband's relatives, the young ballerina remained true to art. And art is bringing happiness into her life.

Some time ago, she went to Western China with a company of Kirghiz actors. It was a triumphant tour. Here is how this tour was described by Kirghiz People's Actress Saira Kiizbayeva, who is a well-known opera singer.

In a square in Urumchi, capital of Sinkiang Province, where the concert was held "the people hurried to occupy the seats closest to the stage. The square was filled with Uigurs, Uzbeks and Kirghizes in their colourful gowns and among them were Chinese men and women in black or blue padded jackets. Those who could not find seats, occupied the roofs of the nearby houses, sat on the branches of trees, utilizing every place giving a view of the stage. It is hard to describe the concert. Every number was applauded long and loud.

"In every town and village, our arrival turned into a festival. Flags were flown and bands played. . . . In some cases an off-day was carried over and a working day declared a holiday so that people could mark the occasion. It was impossible to leave after a concert: crowds stood waiting for us to change and come out to them. It took hours to pass through the solid mass of enthusiastic people to reach the hotel or inn. . . ."

In its own way, this tour was a review of the art of Soviet Kirghizia. It imbued the Kirghiz actors and actresses with faith in their own strength and skill, and showed that Kirghiz art had ceased to be small, local, and that it had entered the world arena.

7. SUNDAY

Waking up on Sunday, you draw the blinds and at once the unbearably blinding sunlight makes you blink.

On a Sunday, young people fill the parks, clubs and stadiums. In Lake Komsomolskoye, swimmers in close-fitting, gaily-coloured caps race in the swimming pool in the "tracks" marked off by tape on bobbing floats. The volley-ball teams have already got down to business in the parks. In the skittle alleys, cagey players take their time over every shot. In the shade of the trees, people are sitting round *toguz-korgohl* boards, a popular Kirghiz table game. The chess and draughts club is crowded. Gymnasts, discus-throwers, runners, jumpers and wrestlers are training in the sports grounds. Besides the usual wrestling, you can see *kuresh*—Kirghiz wrestling with belts. Every Sunday is a holiday of sports in the Kirghiz capital.

Still, you have to choose where to go, and with this problem on your mind you leave your hotel and immediately find the answer.

People driving Pobedas, Moskviches, and Volgas, motorcycles and bicycles, and simply pedestrians are hurrying somewhere, moving in one direction. This is a familiar scene in Moscow, Tashkent, Kiev or any other city. Yet you might or might not guess right. No, these fans are not on their way to a football game. They are hurrying to the hippodrome.

Not a single religion succeeded in sinking deep roots in the Tien Shan Mountains. Prior to the Revolution survivals of paganism were interwoven with Islam. But Mohammedanism played only a formal role—nobody built mosques in the mountains, the women were not compelled to wear veils and the laws of the Shariat were helpless in the face of the *adat*, the code of Kirghiz customs. The only national cult that was raised almost to the level of a religion was the cult of the horse.

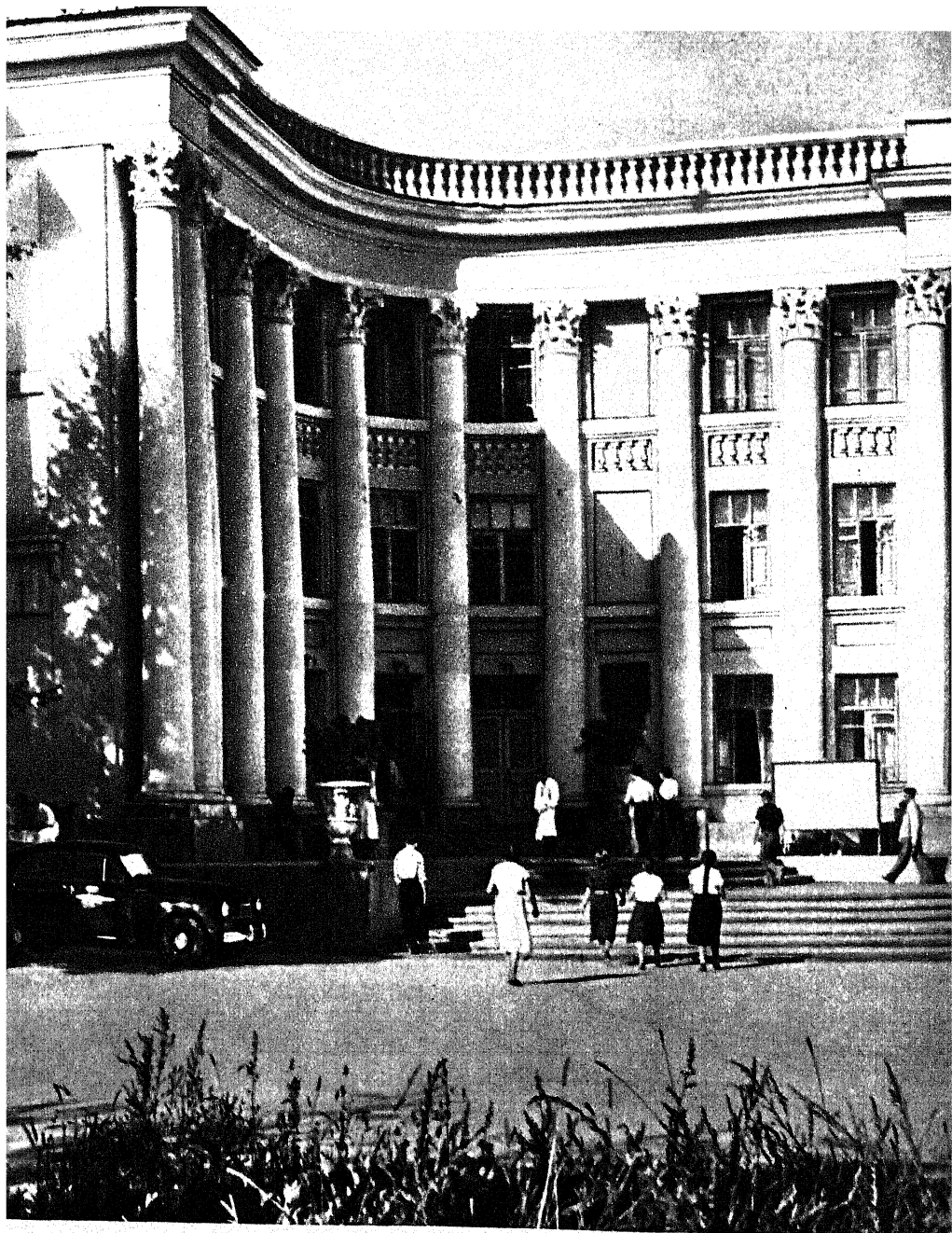
A staunch companion on marches, a provider (not only in the figurative but in the literal sense: koumiss is made from mare's milk, while horseflesh goes into many Kirghiz dishes), and a friend who carries the yurt and all the other meagre belongings of the nomad, the horse has for long ages personified the Kirghiz way of life. Small



Polytechnical Institute, Frunze

Trees in Dzerzhinsky Street, Frunze





Medical Institute of Kirghizia

wonder that folk legends speak in as great detail about horses, their lives and death as about people, and many legends end with the words "There is little that a man and a horse have not gone through."

"Only a horse and an agreeable conversation can shorten a long journey," people used to say in Kirghizia. Another saying was: "If you're given only one day's life, spend half of it in the saddle!" No other language contains so many names for horses of all ages and coats. Legendary warriors performed their deeds on "flat-hoofed and bronze-legged steeds," and to this day the heroes of folk songs gallop on "mounts that feed on cornflowers."

Hundreds of geographical names come from the names of horses. Even in the sky, the horse has been given a place of honour: *jety-karakchy* (seven thieves) are the seven stars of the Great Bear that circle eternally round the North Star—*altyn-kazyk* (the golden picket) --to which is tethered a handsome stallion. The thieves gaze hungrily at it, but they cannot steal up to the stallion and lead it away, because thousands of human eyes keep a watch on them from the earth and there is never a moment when somebody is not looking at the sky.

The Kirghizes speak about horses with great feeling and passion. "It's mercury on the palm of your hand, this horse is."

At the Frunze hippodrome, if you join the stream of people flowing towards it, you will see the magnificent "work" of P. Mansurov, who won the equestrian championship of the U.S.S.R. in 1951, and of S. Mursalimov, the U.S.S.R. champion rider of 1952. Members of the Frunze Cavalry Club will delight you with their expert riding and sabre handling. As a newcomer you will be mostly interested in the Kirghiz national equestrian games and contests. The best time to see these games and contests is during republican anniversary celebrations, for then you will be shown what you will never see anywhere else.

"Even the stone wants to be present when it hears there is to be a *baigé* (races)." On a winter's day in February 1951, the twenty-fifth anniversary of the establishment of the Kirghiz Republic, caravans of cars and cavalcades of horsemen came to the Frunze hippodrome from all the ends of Kirghizia. A huge camp mushroomed into existence on the sparkling snow. The stands were filled to capacity.

Thousands of spectators stood on the trucks around the hippodrome. And along its edge there was an endless row of saddled horses: their masters with the bridles in their hands were squatting in front of them, smoking and watching. It was an unforgettable sight.

The gong sounded, the music of the composite brass band came over the powerful loudspeakers and the parade of the contestants began—girls in yellow, red or blue velvet jackets and small fox-fur caps, hunters with golden eagles and falcons perched on their arms, riders on chestnut, bay, roan, grey, black, dun, skewbald or light-bay horses. The spectators knew the runners and pointed them out to me.

The *akyns*, playing the *komuz* and singing improvised songs in honour of the festival, rode in cavalry formation at the head of the parade. Their broad, silver-bound belts glittered in the sun.

The first event was the *baigé*. Twelve collective-farm runners lined up at the starting line. Steep-sided, looking as though they had been cast from metal, their pike-shaped heads stretched out, the horses got off to a fine start. The riders bent close to the backs of their mounts and the air was filled with the beat of hoofs. The first rider to finish the two laps (four kilometres) was rewarded with a storm of applause and as he pulled his horse up to an abrupt stop and leapt to the ground, scores of hands reached out for the bridle.

Jorgo-salysh is how the Kirghizes call the contest of pacers. This is a race of Kirghiz mountain ponies. As you watch the score of horses covering the six kilometres, you find yourself admiring the iron self-control of the mounts and the riders: the rider only has to wave his whip with more energy than usual over the ears of his horse or to shout "chcho" (the cry with which the Kirghizes urge on their horses) too loudly for the horse to break into a trot or gallop and to be instantly disqualified.

Alaman-baigé is one of the most popular sports in Kirghizia. A large number (several scores) of the most famous racers of all ages and breeds participate in this event. They are ridden by boy-jockeys and fortunes change rapidly, for the shortest distance is fifteen kilometres and it is sometimes as long as twenty kilometres.

Odarysh is a wrestling match on horseback. The mounted wrestlers (one in a skull-cap and the other with a kerchief tied round his head

—after an ancient Kirghiz custom) circle a long time. Finally they come to grips, seizing each other by the arms, neck or the silk sashes wound tightly round their waists, and digging their spurs into the sides of their horses. The mounts strain in opposite directions and, gradually, one of the wrestlers begins to lose his seat, but he still clings to it and sometimes with a powerful twist of his body again regains the saddle. Then again he begins to slip off. To win, one of the contestants has to drag his opponent off his horse and lower him to the ground. The greatest achievement in this sport is when the victor pulls his adversary onto his own mount.

Kush salu and *bürküt-salu* are hunting contests. As the huntsmen with hawks on hands encased in leather mittens ride into the centre of the hippodrome, pheasants and mountain partridges are released from the other side of the field. The hawks soar into air, attack and sink their talons into their prey and bring it to their masters. Then a fox races across the hippodrome. The huntsman with a golden eagle sitting on a horn resting on the pommel lifts the hood off the bird's head. The great bird spreads its wings and sails high into the sky. Catching sight of its prey, it drops like a stone on the fox's head, holding it to the ground and announcing its victory with a loud cry. The huntsman gallops up, takes the eagle and again pulls the hood over its head. The next moment a wolf is seen speeding across the field with *taigans* (Kirghiz borzois) bounding after it and huntsmen bringing up the rear. Wolf-baiting with *taigans* is the last item of the performance by huntsmen.

Kyz-kuumai is an equestrian game in which a girl and a young man take part. According to the rules, the girl gets a superbly trained horse, which can stop dead in its tracks at full gallop and about which people say: "It knows a hundred tricks." The girl sets off at a gallop, dodging the young man. Just as the young rider overtakes her, she turns her mount sharply and the young man speeds past at a mad pace, followed by the girl's ringing laughter. Embarrassed, the young man turns his horse and again makes after the girl. She wards him off with a rolled towel and suddenly lashes his mount with her whip. Snorting, the horse rears up on its hind legs and in the meantime the girl urges her steed into a gallop, filling the air with her laughter.

There were other equestrian games. *Tiyn-enish*, when a coin was put on the ground and riders picked it up as they passed by at top speed. *Jamby-atysh* in which a rider, also at top speed, brought down a silver ball hanging on a thread.

The festival ended with *ulak-tartysh* or *kokber*, an extremely popular equestrian game. Several teams take part. The chief umpire puts a decapitated and hoofless goat in the middle of the field and at a signal from him the riders gallop towards the carcass. The first rider to pick it off the ground, presses it to the pommel of his saddle and makes off with all the other participants racing after him and trying to snatch the carcass away. It changes hands until one of the players succeeds in dropping it on the *moroo*, "goal," marked by a flag. *Ulak-tartysh* is a kind of polo in which a goat's carcass is used as the ball.

8. FEATURES OF THE NEW

I have been here once before, and everything is familiar and yet new! That is what you feel when you begin your journey across the Chu Valley after an interval of many years.

Yes, everything looks familiar. The *suslik* standing like a little pillar and whistling at the edge of the field. The villages ringed by Lombardy poplars. The stony beds of the streams running out of the ravines in the Kirghiz Range and crossing the valley in many places. They look white amidst the greenery: in the morning each is a narrow gurgling brook that can easily be forded, but by nightfall it swells and roars, dragging stones, and even a horseman hesitates to cross it.

The wind blowing from these ravines stirs the red-golden wheat. If you sit down in the wheat so that it hides the snow-blanketed mountains you get the impression you are in the heart of Russia. But a little farther away, the road winds round hills on which nothing but silver feather grass, wormwood and prickly ephedra bushes grow. Sucking-pigs blink on a heavy cart drawn by two horses. An earth-polished ploughshare gleams like dark silver on the edge of a field.

Yes, it is all familiar and yet forgotten, for in your mind it has been different—the smells are different and so are the colours....



Meat-packing works, Frunze

Automatic bottler at a champagne and wine works, Frunze



Suddenly, you cut yourself short as you begin to realize that this is only the first feeling, the first impression, that you have only misled yourself by your longing to see the landscape you have come to love, and have therefore kept a grip on the past. You begin to realize that it is all much simpler than you have thought. everything looks changed not because you have forgotten, but because the colours and the life are indeed different. This becomes especially evident, especially palpable in the villages of the Chu Valley. However, to make this clear to the traveller, I must tell him what these villages looked like twenty years ago.

The contrasts were what struck the visitor in those days.

There were Ukrainian villages: cherry gardens, counterpoised sweeps over the wells, cottages with mounds of earth along their walls; brightly painted window frames; moist-lipped, lop-eared bullocks drawing long, canvas-covered carts along paths leading across sugar-beet fields, and above them the drawn-out Ukrainian "Tsob! Tsobeh!" sounding in the burning air.

There were the villages of the Dungan, a people who came from China: gay poppies blossomed on the flat roofs of the *fanzas*; the small windows had glass in them, but in some oiled paper was still used instead of glass; vegetables were grown round the villages, and the green tips of rice stalks peeped out of the flood fields.

There were Cossack villages sprawling amidst fields of wheat and maize: many of the houses were painted blue; swallows chased each other across the reed-covered gable roofs; scarecrows stood guard in the melon fields; and in the evenings Cossack songs, accompanied by whistling, rang in the streets.

And last but not least there were the Kirghiz *kishtaks*, villages of the indigenous inhabitants of the Chu Valley. In each village, two or three clay-walled houses with tiny, dim windows and an earthen floor reminded people of pre-revolutionary times, when the *kishtak* was the winter refuge of a nomad clan. Twenty years ago, near these huts there already were rows of new cottages with wide windows and brick foundations. But how comfortless they looked, with not a single tree or bush by the porch, nothing save the steppe bur. Behind the houses were the grey outlines of patched yurtas that in those years were still dear to the hearts of the nomads of yesterday: in summer

many of the collective farmers used to move from the houses to the yurtas

The Chu Valley has changed beyond recognition in the past twenty years. In the collective-farm villages there are now schools, clubs, libraries, savings-banks, post-offices, maternity homes and hospitals, nursery schools and shops. Many of the collective farmers live in houses with iron or slate roofs, electricity and radios. You will never be able to tell who occupies such a house—a Kirghiz, Dungan or Ukrainian family.

Describing the fertility of the Chu Valley, the author Sydykbekov wrote: "Not only apple-trees flourish on soil like this, but if you throw camel dung on it, cheese will grow!" Is it any wonder then that even the Kirghiz *kishtaks* now stand beneath the foliage of poplars and fruit-trees? A white Minorca cock struts importantly about the yard of a poultry farm, keeping an eye on the hens. A girl attendant, in a snow-white smock, fills the rack with salt, chalk, bone flour and ground maize mixed with yeast to raise the laying capacity of the hens, then opens the frames to ventilate the fowl-run. Can you tell if this is a Kirghiz, Russian or Dungan collective farm?

Pigeons bustle about on the roof of a cow house. Near by, a silage-cutter, operating from a tractor drive, sings its even song in a sonorous voice, and a finely-chopped mass of Sudan grass flows to the silo trench. Machines have brought a multitude of other sounds to the villages in the Chu Valley: the ring of the electric frame-saw, the hollowish rumble of the winnowing machines, the monotonous drone of the electric thresher, and many, many other sounds. Can you tell if they are Russian, Dungan or Kirghiz sounds?

Mothers, of course, go on talking to their children in their native language. On holidays, the Ukrainian housewife serves cherry dumplings with sour cream, in the Kirghiz home the family sits down to *besh-barmak* (boiled mutton with a thin gravy), while in a Dungan home guests eat and praise *chüanchuantimomo* (Chinese puff cakes). In the evenings you will hear the strains of a concertina in a Russian village, the characteristic muffled notes of a *komuz* in a Kirghiz village, and the liquid notes of a *suonata* (Chinese flute) and sometimes the melodious sounds of the *sang* (Dungan gong) in a Dungan village.

But the dust-raising Ukrainian *mazhara*, the Dungan vans and the Kirghiz camel-carts have disappeared from the landscape of the Chu Valley. The britskas have become noticeably fewer in number. Cars, motorcycles and bicycles now race over the roads, over which crested larks flutter their wings. Horses with saddle-bags are all that lend these roads Kirghiz colour. The sight of horsemen reminds us that we are on the fringe of a land of mountains, where the horse will continue to serve man for a long time to come, enabling him to climb the steepest slopes.

From the foot of any hill you will see features of the new life that has dawned in the Chu Valley. A railway track runs right through the valley, and the blue smoke from the engines hangs over the fields. Electric transmission lines stretch into the valley from the ravines of the Kirghiz mountains, which for thousands of years have given rise to nothing but foaming streams and icy winds that used to blow the roofs off the houses in the villages. Smoke from factory chimneys rises at many points along the horizon: the valley has been industrialized and Russians, Kirghizes, Dungan and Ukrainians work side by side in the new factories.

The main motor road, which has been rolled until it has become glossy, leads from one end of the Chu Valley to the other. Cars follow one another, overtaking heavy dump- and tank-trucks. You will see big yellow, red and blue diesel buses that go to all parts of the Chu Valley, and small buses running into the mountains to Issyk-Kul and the central Tien Shans, collective-farm trucks carrying milk or vegetables, ambulances and postal pick-ups, a motorcycle whose owner rides without a silencer for swank and more privately-owned cars and grey Pobeda taxis than is usual for rural roads.

Try to get a taxi in Frunze when you have to go to the theatre or the stadium. You will find that not easy. But at the Frunze taxi station there is a car leaving every minute, taking passengers to places on the Chu Motor Road tens and sometimes hundreds of kilometres away. The collective farmers of the Chu Valley willingly use taxis and the drivers find it more profitable to make long trips on the motor road where they can drive at a high speed and where they are sure they will not stand idle, than to "crawl about" the city "after small change."

An almost unbroken chain of villages extends along the motor road. Some of the village streets crossing it are so long and seem to be intersected by so many other streets that you begin to wonder if what you see are villages or towns. But you only have to turn off the highway and drive say three kilometres, and in some places only about two hundred metres, to find endless fields with thread-like roads criss-crossing them: the golden stubble of wheat, the dark greenery of sugar-beet plantations, and fields of alfalfa so smooth that it seems the grass had been gone over with a flat-iron.

The fields have little to tell the visitor. They look no different from fields anywhere else and yet you will find features of the new life in them as well.

Go, for example, along one of the dirty roads leading northwards from the motor highway to the frontier of Kazakhstan. Formerly, tortoises were all that could be found in this part of the Chu Valley, the design of their shells repeating in miniature that of the bleak, parched soil. A camel, emphasizing the desert landscape, would pass now and then. But now. . . . Now there are plantations of fibre crops: southern hemp, kenaf and jute. Water has brought life to these steppes. You hear it murmuring wherever you go. But we shall speak about water later, when we reach the Chumysh Dam, from which new irrigation canals fan out. At this juncture we shall only mention that these canals irrigate enormous tracts of land and that four big state farms growing fibre crops have sprung up in the Chu steppes.

From these state farms our car turns back to the south, passing through groves of elms, white and yellow acacias and mulberry trees, which the state farms have planted to protect their crops against dry winds, and, reaching the unbounded wheat fields, it runs between them along a dusty and sultry road.

A harvester combine sails across the sea of wheat. At its approach, an eagle perched on a marker stone spreads its wings, rises heavily and flies away towards the mountains. Two girls, kerchiefs over their faces and goggles over their eyes to keep out the dust, stand on the combine stacker. A truck, crushing the stubble with its wheels, moves alongside the combine. The combine slows down, the unloading conveyor starts moving and golden grain rains down on the tarpaulin spread in the truck.

This, too, was a bare steppe until not very long ago. Water never reached this part of the valley. There was not enough of it. Soviet people have given life to this land in a different way. The whole of Kirghizia knows the name of the plant-breeder Ivan Ryzheya, who is called the "magician" of Kirghiz wheat. His erythrospermum-115 winter wheat has been crowned the queen of the grain fields in Northern Kirghizia. "Stick a twig into the ground, spit on it—and I'll take the responsibility if it does not sprout leaves," Ryzheya used to say. Drought-resisting, fast-ripening varieties of wheat that grow well in the Chu steppe were evolved under his guidance at the Kirghiz State Plant-Breeding Station.

There are thousands of hectares of stone-covered wasteland along the left bank of the Chu and other rivers of the valley. Old-timers called these places the domains of snakes and lizards. Today islands of greenery have appeared: musk melons, water melons and vegetables are grown.

In the past, a traveller in the Chu Valley could come across marshes, where bitterns cried, their beaks in the water. The Kirghiz name for these lands was *mykan*, which means quagmire, still water. Some of these places were quite desolate. The marshes were reclaimed and the reeds burnt down and on this land the collective farmers began to grow rice, maize, buckwheat, flax, tobacco, fruit and, thanks to the efforts of scientists, even such subtropical plants as the persimmon and the fig.

I could also mention collective farms that grow volatile-oil plants, but it would be best for you to go to the Panfilov District yourself and visit the collective farms that cultivate the Kazanlik rose, the Muskat sage, the coriander, the basil and volatile-oil plants all of which are new to Kirghizia.

Have you ever seen a field-full of Kazanlik roses in bloom, when thousands of red blossoms open amid the dark-green leaves? Have you ever filled your lungs with air warmed by the sweet smell of roses? Have you ever heard the triumphant buzzing of so many bees that it seems the entire field is a-quiver with transparent wings shining like silver in the sun? And in conversation with people have you smiled over a bit of local prosaism like "high-speed flower gathering" or "the team has picked three and a half tons of rose petals"? Rose

and the fulfilment of work quotas are a strange combination for our ear, but in the Chu Valley roses are part of life, of collective-farm production. The rose petals go to the local factory which produces volatile oils for the scent works in Leningrad, Riga and Moscow. There the workers, using the volatile oils as an artist would use paints, mix them to form new "compositions" of smells. Later, commissions, which in addition to specialists include leading actresses, give their verdict and open the road to new brands of perfume.

Many of the fragrant smells that bring joy to people are born in Kirghizia. But these smells did not originate in Kirghizia or in Russia, the Ukraine, the Urals or the Far East. The Kazanlik rose and the basil come from Front Asia, the Carum ajowan from India, and so on.

We are happy that our guests thrive on our land. But where is that wealth of wonderful smells that accompanies you on your journey across the Tien Shans? Where is the fragrance of the Russian meadows and fields? Where are the aromas of our forests and rivers, the redolence of the delicate northern flowers and the perfume of the magnificent flowers of the Black Sea coast? Why are they missing in our assortment of scents? And, in general, why must the whole magic world of smells revolve in a narrow circle of sweet-smelling flowers?

I was asked these questions by botanists at the Kirghiz Academy of Sciences' laboratory of medicinal herbs. They showed us stands with rows of test-tubes containing essential oils produced from different varieties of wormwood. Uncorking the test-tubes we breathed in the smells and found that each variety had its own aroma. It was as though we had passed through the entire Chu Valley. After that we were shown essential oils made from mountain grasses. The smell of each revealed to us the Tien Shans in all their beauty. It was just that because the smells took us back to the enthralling landscapes where we first came across them.

Let us for a moment look back at the history of the modern scents industry. It was born at the court of Louis XIV. The fragrance of the flowers in the royal gardens passed to the dresses of the ladies of the French court; trains of flower scents followed the silk trains of the dresses: a simple and yet brilliant invention of the French perfum-

ers. The perfumery salon of Marquise de Pompadour became the perfumery capital of the world. Two centuries later the bourgeoisie of Europe began to find flower perfumery too expensive. Little by little it began to be ousted by inexpensive chemical perfumery. But even this imitated flower perfumery, for the image of the "shopkeeper's wife" was sickening to the bourgeoisie. They wanted their wives to be taken for "princesses, countesses or baronesses." The scents had to resemble scents from the flower gardens of Versailles. What did they care for the smell of the sea foam from the shores of Norway, the fragrance of the hot winds of the Sudan, or the bitter aroma of the savory and wormwood of our Russian steppes!

True, in the pursuit of the new, which marked the beginning of the 20th century, perfumery created scents for the discriminating consumer, which do not exist in nature, but (such is the force of tradition) these were also sweet scents, the scents of flowers which grow if not on earth then somewhere in the abyss of space. Where, I repeat, is all the wealth of scents with which the world is full? Where are the scents, which somewhere on Gorky Street in Moscow send a thrill of joy through you because they remind you of places where you lived as a child or spoke your first words of love?

If only our perfumers tried to dig in these virgin gold-fields, the Tien Shans alone would give them a thousand new scents. The creation of a national perfumery is a great thing. To people who are afraid of tackling something new, the Kirghiz say: "If you must fall, fall from a camel!"

9. PAGES OUT OF THE RECENT PAST

Many people have seen S. A. Chuikov's painting called *Daughter of Soviet Kirghizia*. Against a background showing a blue sky, a distant chain of purple mountains, and a tiny village in the Chu steppe, it portrays a Kirghiz schoolgirl. The girl wears a white dress with a Kirghiz vest over it. A kerchief is tied loosely round her head and black braids fall on her shoulders. The deeply-tanned face, in which you feel the strength of the steppe sun and wind, is calm, serious, showing will-power. She is on her way to school and is carrying books.

This girl represents a generation for whom the pre-revolutionary discords of the peoples inhabiting the Chu Valley are an absurd and terrible tale of the far-away past. These discords, which were so recent that the painter S. A. Chuikov, who was born in the Chu Valley, saw them with his own eyes, are known to this girl only by hearsay or from books, perhaps from those very books she is carrying. Let us take one of them, leaf through it and speak of Kirghizia's past.

"Misfortune overhangs your very eyebrows," declares an old Kirghiz saying. Because of the feudal-clan internecine feuds, misfortune hung over the very eyebrows of the Kirghiz people for long centuries. No family felt secure against the intrusion of a robber or enemy.

In *Journey to the Tien Shans*, Semyonov-Tienschansky, the first Russian scientist to visit Kirghizia, describes what in his day was an unknown land, its mountains, lakes and rivers, birds and animals, and at the same time takes us right into the thick of political events.

In 1856, Semyonov's expedition reached Issyk-Kul after crossing several mountain ranges and there on the shore of the lake found the remains of torn yurtas, which showed that there had been sanguinary fighting between two tribes—the tribe of the "deer" (Bugu) and the tribe of the "yellow elk" (Sary-bagysh). Tragedy struck again during the next spring, in 1857. Separating from its tribe, one of the Bugu clans decided to cross the Tien Shans. In a narrow mountain pass it was attacked and annihilated by Sary-bagyshes. Semyonov-Tienschansky gives a moving picture of the battle-field, which he visited two months later.

"The day was already waning, when skirting round a familiar mountain we found ourselves in a field of the dead. Frozen corpses were scattered all over the ground. I was incomparably more impressed by this sight than by the 'morgue' in the St. Bernard. It was only here that I really felt what the great poet Pushkin meant when he addressed a similar field with the words: 'Oh, field, who sowed you with the bones of the dead?'"*

* From the poem *Ruslan and Ludmila*.—Ed

"It seemed to me that something was moving in this terrible field of corpses and that I was hearing live sounds. Indeed, as I advanced across this desert I saw something moving ahead of me and to my surprise it was no hallucination. A pack of dogs, that had belonged to the Bugus, rushed towards us with joyous barks. They had been living here since spring and had fed on the corpses which did not decompose because of the frost. The dogs remained with us and were our faithful companions throughout the rest of our journey"

After seeing Umetaly, the *manap* of the Sary-bagysh tribe and becoming his *tamyr* (blood-brother), Semyonov-Tienschansky visited Borombai, the *manap* of the Bugu tribe, and helped to establish peace between them. Borombai was so delighted with his mediation that he asked the Russian scientists to convey the desire of his tribe to become subjects of the Russian crown. Semyonov tells us that the tsarist officials were quick to appreciate the political significance of this act. They realized that the "Sary-bagyshes, who were living between two fires—between the Kirghizes, who were protected against enemy raids by Russian arms, and the unrestrained and stronger nomads of the Kokand khanate, would soon follow the example of the Bugus and show a desire to become Russian subjects..." Indeed, four years later (in 1882), the Sary-bagysh tribe adopted Russian citizenship. In order to show what this meant, we must say a few words about the Kokand khanate

"If the khan's *zeket-pasha* will make believe he is a bridge, do not cross it," the Kirghizes used to say of the Kokand tax-collectors. In the Kokand khanate arbitrary rule was law, murder a virtue, while the system of taxes was developed into a fine art: the seller and the buyer, every person entering or leaving a Kokand fortress (there were two of them in the Chu Valley—Pishpek and Tokmak), and even poor people setting out for the mountains to gather brushwood for fuel, had to pay a special tax.

It is said that one day a Kirghiz drover, who had bought a *kamchu* (whip) in the market and refused to pay the "buyer's tax" to the tax-collector, was brought before the Kokand khan Madali. The khan ordered the drover to be impaled. But somebody whispered into his ear that good drovers were few and that if this man were executed all the other drovers would flee and there would be nobody to look after

the khan's horses. So Madali ordered the guards to seize the first shepherd they saw (there were more than enough shepherds in the khanate) and execute him instead of the drover. A shepherd was seized and executed in public in the Kokand market-place. Then Madali sent messengers all over the Tien Shans to tell the people about this, "so that the khan's subjects would see his wisdom and fairness and, what was more important, would tremble with fear at the mention of his name"

It makes no difference if this did indeed take place or is an invention of a story-teller. In either case, the story vividly shows the orders that obtained in the Kokand khanate. It is not surprising that the Kirghiz tribes turned their gaze to the North, to the Russian state, long before Semyonov-Tienshansky came to them. Seeking salvation from the armed robbers of the khan, from the quarrels of their tribal chiefs, one Kirghiz tribe after another sent envoys to Russia to ask "for the protection of the white tsar." Russia was far away and for a long time nothing came of these embassies.

The Kirghizes frequently rose in arms against Kokand oppression. And when the advance posts of the Russian state approached the Tien Shans, the Kirghiz tribes (first the Bugu, then the Sary-bagysh and the Solto, who wandered about the Chu Valley, and a year later the Sayak and Cherek tribes, which lived deep in the mountains near the Chinese frontier) joined the Russian state without any outside pressure. Tsarist Russia was extremely interested in Kirghizia's incorporation. She needed sources of raw materials and markets for her manufactured goods—the narrow home market was hindering the development of capitalist industry in Russia.

Kirghizia interested Russia also as a new region of settlement for the "surplus" population and as a convenient bridgehead for stopping British expansion in Central Asia. Kirghizia's incorporation with Russia was of immense importance for the Kirghiz people. It freed them from Kokand tyranny. Commodity and monetary relations replaced the natural economy. Slavery was abolished and the feudal-clan internecine strife was relaxed. This aspect of Russia's movement eastwards was what gave Engels grounds for writing to Marx: "With respect to the East, Russia is indeed playing a progressive role."

But "every fur cap has its wrong side and if even the richest fur cap is turned inside out it will look like the cap of a poor man." "Freeing" the peasants from serf bondage and at the same time from the land, the tsarist government passed an *ukaze* in the 1860's, in which it was stated that "indigent and dissatisfied people who are dutiful and fit for work, and also those who are on occasion unsound of mind but not violently insane are subject to resettlement in Semirechye with all the privileges that have been granted to settlers" In this way, the government not only sought to rid itself of the dissatisfied peasant population but also to establish on the outskirts of the empire a reliable bulwark in the person of the kulaks: the land in Semirechye was fertile, grain grew splendidly, and there were great numbers of Kirghizes who had neither land nor bread and that meant there would be cheap labour.

"The worst land was left to the Kirghizes, the best was taken from them and given to the Russian settlers, who, instead of cultivating it themselves, found it more profitable and convenient to lease the land to the Kirghizes it had originally belonged to or hire them to work it for pitiful wages. It thus turned out that the Kirghizes had to pay money if they wished to cultivate land they had once owned." This excerpt from the report of a Cossack general to the Turkestan Governor-General Kuropatkin requires no comment. It clearly reveals the purport of tsardom's resettlement policy and the way this policy was implemented

The Kirghizes were first ousted from the Chu Valley, where there were Kirghiz farms. The farm land was taken away from them, and the Chu Valley became the arena of a savage international struggle. The Cossack old-timers in Semirechye grazed their livestock on the fields of the Ukrainian settlers. Both the Russians and the Ukrainians stole horses from the Kirghizes and the Dungan. The kulaks seized the land belonging to the Kirghizes. Meanwhile the tsarist authorities strove to smother class contradictions by kindling national discord.

"Sometimes," relates an old collective farmer named Chumakov, "the Cossacks would go to the volost court and complain that the Kirghizes had stolen a herd of horses from them. It would be a lie from start to finish. They would make the complaint just to stir up trouble. And the judge was always glad to get a case like that. He

would call witnesses, turn the matter this way and that, but everybody knew beforehand what the decision would be. The Kirghizes would be ordered to 'return' the stolen horses. They'd shout and complain in their yurtas but the horses would always be produced. They could not help but do that for they were in the position of dependants."

In the Tien Shans bribery and all manner of extortion became the chief, dominant spring of state administration. The Kirghiz people were plundered and the Kirghiz *manaps* and *bais* made sure of a share of this plunder. Most of them bought for themselves the post of *bolush* (volost administrator) and, utilizing their power in the clans and the survivals of feudal relationships in the country, intimidated the people with the Russian policeman and more than compensated their "pre-election" expenses. Clan chieftains of this stamp became kulaks, the owners of great herds of horses and numerous flocks of sheep.

Two sayings living in the mountains as reminders of the recent past vividly show the relations that obtained between the main strata of the Kirghiz people on the eve of the Revolution: The first—"The horses' mouths are tied and they do not neigh, but the well-fed bull roars at the top of its voice"—speaks of the *bai* and the poor man, the helplessness of the nomad toiler before the rich man. The second—"if you give, we'll take, and if you do not give, we'll take anyway,"—are words spoken by the feudal lord's *atkameners*, armed retainers, who robbed the people; these words sprouted wings and became a saying.

Then as now, the sun travelled in an arc above the mountains, sheep bleated in the ravines, the whistle of the mountain turkey carried far into the distance, beautiful butterflies fluttered over the pastures, and the wind carried the spray of the waterfalls. And in the midst of this radiant landscape, the shepherds, the masters of these magnificent mountains, lived in shabby yurtas, in dirt and squalor. They were fleeced by the *bais* and the tsarist officials. Disease cut them down as though with a scythe. The Kirghiz people began to die out.

The agony of those days is preserved in the songs of Toktogul, a Kirghiz poet who was put into irons by the tsarist government and exiled to Siberia for his revolutionary songs.

"May you be damned, diseases that burn us so that nothing but bones remain!

"May the greed of the *bai* and of the Russian judge be damned—it is like the stone my life is weighed with on the scales!

"Everybody knows, even the dust on the road knows, that stone is much heavier than bone!

"Who will hit stone against stone, and strike the spark to light the fire of happiness?"

This song was echoed by the rattle of the shackles on the wrists of the singer. Meanwhile, the conquerors, building a line of fortresses, moved into the mountains and dealt the Kirghizes a blow right at their hearts, a blow at their pastures.

The Kirghizes who fled to China gave the following description of their position in a petition submitted to the Russian consul in Kulja: "Our lands were taken from us on the pretext that we do not serve in the Army, and we were driven to the mountains. But the mountains, covered with forest, turned out to be the property of the state. Taxes were imposed on our livestock and yurtas. The land went to the settlers, the mountains to the Treasury, and we were left with nothing. . . . Every volost annually paid a fine of several thousand rubles. Those who had the money paid, and those who could not pay went to gaol."

Russian imperialism took the pastures away from the nomads so as to be in a position to pay next to nothing for the livestock, for which the Kirghizes were no longer able to find grazing grounds, and systematically force a whole people to migrate "to the summits of the mountains" (as the Kirghizes wrote in another petition), to barren rocks and glaciers. Driven to desperation, the Kirghiz people rebelled.

This uprising was sparked off by the edict "On the Mobilization of Non-Russians in the Empire for Work in the Rear," which was published in 1916.

The edict added fuel to the already heated atmosphere. In the mountains, tension increased hourly. Tsarist authorities circulated a provocative rumour about a "revolt" among the Kirghizes. The peasant settlers feverishly began to arm. Russian kulaks beat up a Kirghiz and in that situation this was enough to make the Kirghiz farm-labourers flee from the villages to the mountains. The frightening news that a massacre was in the air spread like wildfire. Terrified by the

approaching storm, the Kirghiz *manaps* and *bais* did everything in their power to avert it. On August 20, three hundred "respectable Kirghizes" went to the uyezd head in Pishpek and insistently requested that troops be sent to the mountains to calm the young people. It was only when, flaring up in the Chonkemin Valley, the uprising spread swiftly that some of the wealthy Kirghizes were compelled to associate themselves with it.

The first act of the insurgents was to burn down the post-chaise stations and the bridges along the carriage road from Pishpek to Przhevalsk and from the village of Rybachye (on Issyk-Kyl) to the Naryn fortifications. They tore down the wire from the telegraph posts and hastily began to make weapons: pole-axes with long handles, primitive bows and arrows, spears with tufts of horsehair around the heads, sticks with screws on them, and a small number of old-fashioned muzzle-loading firearms.

On August 22, the insurgents in Sary-bagish volost seized an arms transport moving to Przhevalsk—nearly two hundred rifles and three thousand rounds of ammunition. Although few of the Kirghizes knew how to handle a rifle, the news evoked tremendous enthusiasm. Kirghizes from the most remote volosts began to join the uprising.

Some of the local feudal lords and *bais*, who had had no alternative but to join the insurgents tried to get the latter proclaim a *haza-vat*, a holy war, against the "infidels." With active British support, they met with a certain measure of success in various places in Central Asia. But in Kirghizia, the uprising developed on a nation-wide scale and was directed not only against the Russian settlers but also against the *manaps* and *bais*.

General Kuropatkin, who cabled to the Governor of Semirechye: "I hope the first score of shrapnel will scatter the Kirghiz mob," moved cannon against the nomad people and drowned the uprising in blood. Those were tragic days. Only the voices of women mourners could be heard in the mountains. Most of the people fled to Sinkiang with their herds and meagre belongings. Late in the autumn, horses and groups of hungry, freezing men and women, children and old people wended their way across the snow-packed passes, deep ravines and glaciers.

The writer K. Bayalinov, who was in that march as a boy, tells us about it in a story entitled *Ajar*. "There was total confusion. And nobody knew what group his relatives were with, or in what flock to find his sheep." The description of the road in the mountains covered with strange rocks deeply impresses the reader. "Some of these rocks began to move and shake off the snow. A shivering sheep would scramble to its feet or a half-frozen human being covered with a piece of felt would rise."

A fresh calamity descended upon the Kirghizes at the frontier. The Sinkiang *taotai* doubled the guards at the passes and the refugees were allowed to cross into China only after paying a ransom. That deprived the Kirghizes of their last horses and sheep. Small groups of people carrying the remains of their chattel on their shoulders came down the slopes of the Kok-Shaal Mountains into China. The Kirghizes were dislodged from the Tien Shans and doomed to extinction.

They were able to return to their native pastures from China only after the October Revolution. The young Soviet Government in Turkestan gave the refugees land and livestock. Neither famine, nor pestilence, nor the kulak rebellions in the villages of Belovodsk, Talass and Naryn could prevent the Russian workers from extending fraternal aid to the Kirghiz people. The Kirghizes were returned to life and experienced a second birth.

10. ROMEO AND JULIET OF PISHPEK UYEZD

Endless in its manifestations that have their own laws and yet never repeat themselves, life sometimes tells a remarkable story as though wishing to throw a bright light on its past. One of these stories made a lasting impression on me. I heard it at a collective-farm Komsomol meeting. It was related by an old man, who was invited to the meeting by the Secretary of the Komsomol Committee. Resembling a novelette written on no more than four pages, this tragic story has now been passed by word of mouth throughout the whole of the Chu Valley.

Long ago, when the story-teller was a young man, shortly before the events of 1916, there were in this village a girl and a young man,

Lena Korolkova and Chalagyz Beishe. Chalagyz worked for a kulak. Lena worked for the same kulak in spite of her being his niece. Both were orphans.

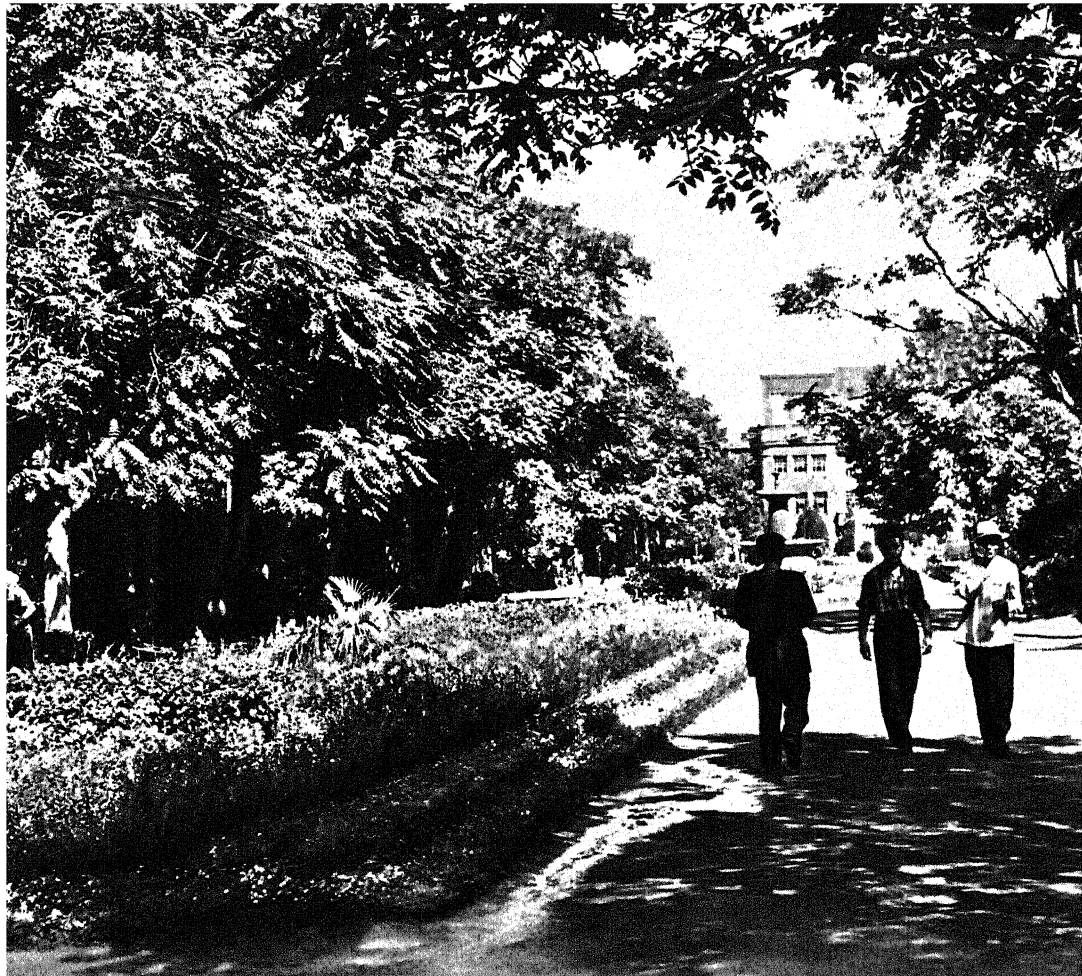
Like many Kirghiz women in those days, Chalagyz's mother died in child-birth, while his father left the home one day and never returned—nobody knew if he became the victim of some petty feudal lord or if he had simply been buried alive by an avalanche. Lena's father was killed in the Russo-Japanese War, and the girl and the mother lived in abject poverty in their native village in Siberia. A year before the events described, her mother died, but before dying she told Lena to go to the far-away "land of Pishpek," to her father's brother—their only living relative who had for many years been living in Semirechye and who, rumour had it, had grown rich.

The uncle received the niece coldly and to make her earn her keep put her in charge of the cattle yard. Her job was not an easy one, for she had to look after eleven cows and a score of horses, to say nothing of the pigs, sheep, chickens, geese and turkeys.

Chalagyz was a shepherd, and in his spare time he helped about the household, mending the cow house, changing the straw beddings and carting the droppings from the stable to the field.

Perhaps it was the coarse shouts, the reproaches and the underfeeding that was their common lot as orphans, or (we can only guess) those fleeting moments of delight that go right to the heart at the sight of cranes flying in wedge formation, or some other lovely picture of nature that finds a response in the depths of the soul and wrests tears of joy from the eyes, but in all probability it was all these things combined that made the Russian peasant girl and the young Kirghiz labourer fall in love.

There were rumours that Fyodor Korolkov found this out earlier than the young man and the girl became aware of their feelings. Whether this was true or not, the fact remains that Korolkov beat his niece—she was all in bruises for some time—and sent Chalagyz to work in the fields with the other labourers. Korolkov did not want to discharge him altogether, for the lad was meek and much too good a worker. It is also related that Korolkov derided Chalagyz in front of people, saying: "I'll let you have my niece if you work off the *kalym*. My price is fifty horses!" And, very pleased with himself, he added



Central City Garden, Frunze



A department store in Frunze

Kirghiz Opera and Ballet Theatre



with a wink at his listeners: "That's the *kalym* I want by your, Kirghiz, customs!"

It was only then, when Lena and Chalagyz were separated, that they realized they could not live without each other. We must assume that they met in secret. And we must conclude that Lena shed many a tear. In those days it was inconceivable that a Russian girl should so much as mention wanting to marry a Kirghiz. It was simply unthinkable.

Who can tell how long Lena wept? The year nineteen-sixteen dawned. At first the village elder read the tsar's edict on the "mobilization" of Kirghizes. Then evil tongues began to spread the rumour that the Kirghizes wanted to massacre the Russians. Frightened by the rumours and by the vengeance that was bound to follow in reply, the Kirghiz farm-labourers made off for the mountains. Chalagyz went with them. This was in July. The kulaks, whose crops had not been taken in, began to pour more oil into the fire. In short, the events we have already spoken of, began to take shape in the Chu Valley.

The story has it that one night Chalagyz came to the cattle yard to see Lena in order to persuade her to go with him to the mountains, to his brothers. He told her she would be received as his bride. But Lena thought of the mountains she did not know, of life in a yurt. Fear gripped her and she hesitated. At this time Kirghizes were seized on sight. And Chalagyz was seized when he was making his way to Lena for the second time. He was taken to Korolkov. The latter would have killed him outright, but the wheat had ripened and was waiting to be harvested, and the kulak needed labourers. He threatened Chalagyz with death and locked him up in a shed until the morning, when he intended sending him out into the fields with a scythe.

That was when (where did the courage come from?) this thin, downtrodden girl deceived everybody. She freed her beloved and before the sun rose over the mountains sped away with him on two horses.

There is a saying which, born in the mountains among the Kirghizes, has taken root among the Russians living in the Chu Valley: "If you show your new-born son to the crow, it will say he is too white. If you show him to a hedgehog, it will say he is too soft. If you

show him to a snake, it will say he is too fat. And if you show him to an ant, it will say he is too big" The harm would not have been very great had it been limited to the fact that the women of Chalagyz's clan thought the Russian girl's nose was too snubby, her hair too light, and her eyelashes too white

The trouble was that Chalagyz took his love to his clan at an unhappy time. A hatred for everything Russian, fanned by the *bais* and the Moslem preachers, smouldered in the hearts of the nomads who could not understand what was happening.

The entire aul came running to gaze at the Russian girl that Chalagyz had brought. The air was electric with tension. The old women, gesticulating with their bony arms, rained curses down on her head. The men stood sullenly in a circle, waiting to hear what the elders would say. An *aksakal* at last stepped forward. He listened impassively to Chalagyz's passionate words in defence of his beloved, shook his head in disapproval and said that marriage between a Kirghiz and a Russian boded no good, that the Cossacks would come and put the whole clan to the sword in revenge. In the end the old man lifted his arms to the mountains and, calling upon the clan's ancestors to be witnesses, banished Chalagyz from the tribe. Fearing for Lena's safety, Chalagyz turned and left with her at once, hanging his head low as he quitted the aul with the huge throng gazing silently after him.

Thus the Russian peasant girl and the young Kirghiz farm-labourer could find a haven neither among the Russians nor the Kirghizes. They were alone in the world amidst the Tien Shan Mountains.

In three weeks they were far beyond the mountains, beyond the valleys of the Tien Shans—they reached China where they went to the town of Uch-Turfan. They were lucky for they crossed the frontier before it became the goal of the Kirghiz people seeking salvation in flight. For that reason they only had to pay a small ransom, giving their two horses to the Chinese frontier guards. In Uch-Turfan, Chalagyz found employment with a Chinese landlord, and this too was a bit of luck. Some time later, so many people in rags and ready to work for whatever they could get came down the Tien Shans that if Chalagyz had come at the same time he would have had not the slightest chance of getting work.

And so, at a grim time for the Kirghiz people, when death was reaping a rich harvest among them, fortune, a poor man's fortune it is true, smiled at Chalagyz and Lena: they had a hut, a dark one, but it was theirs, and they were not wandering along the roads of Sinkiang among the crowds of destitute refugees. Who knows, perhaps Chalagyz and Lena might have settled down to a quiet life in a foreign country had it not been for international politics. Yes, international politics!

Seeing that most of the Kirghiz people were leaving their villages and crossing into China, General Kuropatkin sent a circular telegram to all the towns in Semirechye, which read: "Overtake them and make them turn back." The tsarist authorities realized that Kuropatkin was afraid one of the foreign envoys might express his surprise to the tsar, and to keep up appearances the tsar would have to get rid of Kuropatkin. Moreover, the person appointed to replace Kuropatkin might, as a warning, deprive many other people of their soft jobs.

Therefore, in an effort to whitewash themselves in good time, the officials and police blamed everything on the Kirghizes, against whom, they claimed, they had acted in self-defence. They filled the Black-Hundred newspapers with wails about the "atrocities committed by the Kirghizes" and took pains to invent lurid stories about Russian peasant women suffering at the hands of their Kirghiz captors, knowing full well that this would evoke an outcry of indignation in the country and abroad. In an official representation to the *taotai* of Kashgar, which was made immediately, the Russian Government requested that steps be taken to locate Russian women and children "abducted" by the Kirghizes and to turn them over to the Russian authorities.

One day in November, when Chalagyz went to the town of Aksu together with his employer's steward to sell fruit in the market, Chinese guards appeared at his hut. An interpreter from the Russian consulate was with them. Lena refused to go with them. She struggled, screamed, shouted for Chalagyz, but she was seized, tied and taken away. How was she to know that the tsar's menials needed her in order to justify the uproar they had raised in the press.

When Lena was brought to Tashkent, two hundred "philanthropists" from among the wives of the tsarist officials fussed over the

"unhappy victim," took her to a specially furnished house and surrounded the peasant girl with luxuries she had never seen in her life. Later, they took her to Verny and to other towns where the comedy was repeated in every detail. Some time passed, and when Kuropatkin felt secure again, the need for Lena fell away and she was sent back to her village.

There, her uncle, Fyodor Korolkov, tied her to a cart, took off her skirt and whipped up the horses. The neighbours who witnessed this, loured at her and derided: "This will teach you to run after Kirghizes, you hussy!" Lena did not get over the shame and committed suicide with a scythe that same night.

During that winter, one of the peasants met Chalagyz. A shadow of his old self, he had returned from China in the hope of finding Lena. His only food was the unharvested barley that he dug up from under the snow. The peasant told him of Lena's death. When spring came and melt-water ran down the fields in the Chu Valley, the peasants found Chalagyz's body. He was lying hunched up near the grave of his beloved.

11. VALLEY OF SUGAR

In the autumn of 1942, twenty-five years after the death of Lena Korolkova and Chalagyz Beishe, a Russian girl of about eight knocked on the door of the house of Surakan Kainazarova, a leading sugar-beet grower in the Kirghiz village of Belek. She was barefoot, her head was uncovered and she wore only a light frock. The little girl asked for bread. The mistress of the house gave her a white roll. The girl came again on the next day and begged Kainazarova to adopt her.

The girl's name was Tanya. She lived in Kant, a small town in the heart of the Chu Valley. Her father was in the Army, and her step-mother had turned her out of the house. The search for relatives had brought Tanya to Belek.

I shall not describe the emotions that filled Kainazarova. All I shall say is that this Kirghiz woman took the Russian girl into her house, washed, fed and clothed her and sent her to school. On Kainazarova's

lips the Russian name Tatyana sounded Tatyna, perhaps because she could not pronounce it or because this made her feel the girl was hers. Who can tell?

A year and a half later, a man walking on crutches and wearing an Army greatcoat came to Kainazarova's house. "I have come for my daughter," he said. "I am told she lives here." Kainazarova asked the man into the house, found Tanya who was playing with some friends, took her by her hand and brought her to her father, saying with pride. "Here is Tanya. She's in the third form now."

Hospitable hosts, Kainazarova and her husband made the visitor stay overnight. Then they begged him to stay the day and the next day. When he took his leave on the third day, the girl's father said: "If you don't mind I would like Tanya to live with you while I am away. . . ." It was evident that as he was returning to the Army he felt his daughter would be happier not at home but here, with this kind Kirghiz woman.

Tanya's father never returned. He was killed at the front. Tatyna, as the girl was now called, went on living with Kainazarova, finished eight classes and then followed in the footsteps of her foster-mother. She became a sugar-beet grower. It would not be out of place here to tell the life story of Kainazarova herself.

In her childhood, Surakan Kainazarova helped her father tend livestock. He was a shepherd employed by Russian kulaks in Sokuluk, a village in the Chu Valley. At fourteen Surakan was sold to a 50-year-old shepherd for two rams and a jade. Marriages such as this were usual among the Kirghizes.

Kirghiz women and girls used to be sold like cattle, exchanged for sheep or hunting falcons, given as presents or gambled away. Old accounts showing the price of Kirghiz girls sold into slavery were found after the Revolution. In good years they were sold for the price of a grey gelding, and in lean years, when livestock perished for lack of fodder, for a basket of onions. In a song about women there are lines, which say: "If her grief is spread on a road, there will not be enough *elechek* to measure it! If her tears are collected together, there will not be enough *elechek* to dry them!" *Elechek* is the extremely long, broad ribbon of fine, white cloth that the Kirghiz women wind round their heads

Until 1928, Surakan and her husband lived in poverty, working for the *bais* and kulaks. One day, Surakan brought some water from a pond without noticing that there was a frog in it. Furious, her mistress kicked the young woman in her stomach. Surakan was pregnant and that kick forced a miscarriage. She was ill for a long time after that, and when she recovered she found she could never have children again.

Although there was accord in the family, Surakan had to abide by the old rules: the wife had to do whatever the husband said, know her place in the yurt, which was by the door, pass elders at their backs, hide from her husband's relatives (before giving birth to her first child), refrain from calling her husband's relatives by their first names, and observe many other brutal customs.

The years 1927-30 witnessed a revolution in the life of the Kirghiz women. This was a time when they used to come to the Women's Department^{*} with questions like "Am I allowed to call my husband by his first name?" or "Am I allowed to look my father-in-law in the face?" Getting an affirmative answer, they would laugh as though they had heard something funny. But their eyes would shine with happiness. This was a time when Dungan women were already participating in meetings, but sat with their backs to the presidium and voted without turning their heads. This was a time when an assassin sent by the *bais* broke into the yurt of Kurban-Jan Zadunbayeva, who worked at a Women's Department, crying: "You have broken the laws of Allah! You have become a commissar!" and stabbed her in the back. In those years Surakan worked at the incubatorium of a state poultry farm. At the farm she received a prize for exemplary work and that raised her stature in her own eyes.

In 1930, Surakan joined the collective farm that was being organized in her native village. At the collective farm, where work made men and women equal, the Kirghiz women found their feet. I remember the words of a Kirghiz woman collective farmer uttered in 1930 at a meeting: "When I ride side by side with the men, I feel as though wings are growing on me from pride and joy!"

* These departments were set up at Party organizations with the purpose of enlightening women and drawing them into socialist construction.

And nobody was surprised when in 1935 Surakan Kainazarova, an ordinary Kirghiz woman, took the floor at a district conference of sugar-beet growers called to discuss an appeal made by Maria Demchenko, and declared that she would emulate the famous Ukrainian sugar-beet grower. That autumn brought her her first triumph. Her team grew five hundred and fifty centners of sugar-beet per hectare, which was the record of Maria Demchenko's team. Fame came to Kainazarova.

Surakan went to a conference in Moscow by rail (it was the first time she saw a train) In the Kremlin she received the Order of Lenin from the hands of M. I. Kalinin, the late Chairman of the Presidium of the Supreme Soviet. The reception she was given when she returned home to her native Chu Valley was such that it was beyond anything any Kirghiz woman had ever dreamed of. Surakan built a house, her first house—she had lived all her life in a yurta. And when she moved into the house she keenly felt how empty it was and how hard life had been on her. She missed the voices and laughter of children.

She and her husband decided to adopt an orphan. Since then, the house has always been filled with the voices of children. Surakan and her husband brought up their first adopted son, then another. Altogether they adopted eight children, including the Russian girl Tanya.

Kainazarova's fame has not dimmed in the course of twenty years. She systematically grows big harvests of sugar-beet, the newspapers write about her, she receives prizes, and delivers lectures for the benefit of other sugar-beet growers. Everybody in the Chu Valley knows this big, pink-cheeked woman, who is always calm and always good-natured.

Sugar-beet is a relatively new plant in the Chu Valley. It was first grown there in 1930 and immediately yielded a harvest with an unprecedentedly high sugar content. Nature seemed to have destined the Chu Valley for sugar-beet—nowhere else in the Soviet Union are the soil and climate more suitable for this crop. And the Chu Valley rapidly became an important producer of sugar. Five sugar refineries have been built to process the crop from the sugar-beet plantations.

A town named Kant, which in Kirghiz means "sugar," sprang up in the centre of the Chu Valley.

Surakan Kainazarova likes to say that "the sun is sugar!" It is no simple matter to "catch" the sun and turn it into sugar. That requires skill, knowledge and hard work. Surakan went to the Ukraine and from Maria Demchenko learnt how to help the plants "catch" the sun, to "extract" sugar from it. She also went to the U.S.S.R. Agricultural Exhibition in Moscow, where in 1939-40 a whole stand was devoted to her personal experience of growing sugar-beet. In 1938, she met Academician Vasily Williams at a sitting of the Supreme Soviet of the U.S.S.R. and had a fruitful talk with him. In 1942 she spent her vacation at the same holiday home as the outstanding biochemist Alexei Bach and their conversations greatly broadened her knowledge. So an ordinary Kirghiz woman who had been sold for two rams and a jade a quarter of a century ago now lectures on sugar-beet growing to Russians and Kirghizes and her team has developed into a school for other teams. More than twenty of her pupils now head teams in her own collective farm.

"The height of a tower is measured by the shadow it casts, and man's glory by the number of enviers he has," people say in Central Asia. Surakan too found the number of people envying her growing every year. They said: "Anybody will grow fat on rich soil." That made Surakan choose a field on a stony section of ground where the poorest crops were grown. "Do not worry," she told the members of her team, "we shall reap two harvests. a harvest of sugar-beet and a harvest of pride in our labours."

The writer Bayalinov, who witnessed these events, gives us an interesting account of how Surakan set about cultivating the new field:

"Surakan knew she was tackling a hard job. To win this unparalleled contest with the soil at the collective farm meant shaking the notions about the limits of collective-farm labour to their very foundations.

"She went to the shepherds and persuaded them to drive their flocks to her fields. She helped the *chabans* so that they 'would not go to the wrong address.' All that winter she had manure carted to

the fields and saw that it was carefully mixed with the snow. On top of that she collected all the ash she could get.

"As soon as the snow melted, she had the manure scattered about the fields so that each patch of land would get its share of nourishment. And when the tractor-drawn plough turned over the soil it shone in the sun as though it had been smeared with grease. Surakan walked after the plough, and, as the machine and tractor station workers later said, 'sang her own song.'

"'Deeper my dear. Deeper. Turn every bit of it Give the soil what it needs'

"And the tractor-driver ploughed up the land in straight, even furrows, layer to layer, without a single flaw, to the right depth. He simply had to do a fine job, he could not fail the woman following him and picking beetles and worms off the furrows and putting them in a bottle with such scrupulous care that it seemed they were beasts who were threatening her life.

"When the ploughing was finished, Surakan again solicitously fed the earth, scattering ash and droppings with a generosity that matched the greed with which she had collected them.

"The team examined the fields again and again, picking up pebbles that had lain pressed in the ground for thousands of years. Left in the ground they would become red-hot in the burning summer sun and turn into driers around which the soil would bake and crack and let the sun reach the roots of the plants."

In this way Surakan turned a bad field into a good one and in the autumn, the two hectares of land which she had personally tended yielded a thousand centners of sugar-beet each. For this she was decorated with the title of Heroine of Socialist Labour and during the All-Union Art Exhibition her portrait was hung in the Tretyakov Picture Gallery in Moscow. Is this not fame?

In "To Her Who Grows Sugar-Beet," a verse by Alykul Osmonov, there is the following dialogue:

"So before we've been mistaken in our field?"

"Yes, today a thousand centners every hectare yields!"

"What, a thousand? That is splendid! Let me shake your hand."

"Oh, I fear it is too calloused, soiled with working on the land."

This dialogue between a Kirghiz poet and a Kirghiz woman collective farmer becomes all the more forceful for us when we remember that Surakan has brought up a Russian girl Tanya and had given her an education, while as a boy Alykul Osmonov, who lost his parents when he was a child, was nurtured by a Russian woman, to whom he has dedicated his poem "To Grunya Savelyevna," which has the following lines.

*You gave me sweetmeats, like a son you pampered me.
Let him grow up, you said, let him be strong,
And with the sun you used to rise to take me on your knee.*

Can anything show the friendship of the peoples inhabiting the Chu Valley more strongly than maternity?

12. LAND OF PANFILOV'S MEN

The streets of the village of Shalty are lined with sharp-pointed poplars. A turkey, showing off its black plumage shot with bronze, struts along a ditch. A cock crows somewhere near by. And none of the women know what feelings, what memories this hoarse crowing stirs in the heart of the tractor-driver, who steers his rumbling universal machine through the village.

A soldier sent on reconnaissance during the Patriotic War crawled up to a village and strained his ears: men were talking in the houses, but in what language? Russian or German? Suddenly, a cock crowed. The scout grinned. If the cock was alive and kicking there could be no Nazis about! And he strode into the village. The thunder of war had long died down, but now and then the collective farmer remembers the odious face of the chicken-thief who had broken into the Land of Soviets.

When the war ended, Kirghiz mothers, following an ancient custom, threw water over the heads of their soldier sons before kissing them and welcoming them back to their family hearths. But not all came back, and one of them was Duishenkul Shopokov, whose statue stands on a tall pedestal in the village of Shalty (stepping forward

he is swinging a bunch of hand grenades). He was one of Panfilov's men, one of the famous twenty-eight.

"There are the tanks again, friends. Less than two for each. We shall all have to die. Russia is vast, but there is nowhere we can retreat to. Moscow is at the back of us!" Who can forget these words, which have entered history. They belong to political instructor Klochkov-Diev, one of the renowned Panfilov guardsmen. And twenty-eight men stopped fifty-four enemy tanks.

A courageous man does not blink in the light of the sun, but a coward is blinded even by the moon. The soldiers began to hurl bunches of hand grenades and one after another the enemy tanks caught alight. Angry clouds of black smoke enveloped the battle-field, falling like a curtain around the bare branches of the trees. Deciding that there was a strongly-fortified line in front of them, the Nazis fled in the surviving tanks. When the smoke dispersed, the stretcher-bearers of the unit that had come up to occupy the position found the bodies of the twenty-eight dare-devils who had stopped enemy tanks at the very approaches of Moscow.

The 316th Rifle Division, which was subsequently renamed the Panfilov 8th Guards Rifle Division, was raised in Kirghizia and in South Kazakhstan. In it the men of Semirechye—Russians, Kirghizes and Kazakhs—fought side by side. General Ivan Panfilov, who won distinction in the Civil War as one of the leading officers of the Chapayev Division, was Military Commissar of the Kirghiz Republic on the eve of the Second World War. He too died the death of a hero defending Moscow.

During the Second World War, the whole of Kirghizia applauded two feats: the military feat of Kuvat Jumatayev and the labour feat of Kerimbübü Shopokova. Jumatayev, former secretary of the Jalal-Abad Komsomol Regional Committee, followed the example of the sailors defending Sevastopol and threw himself under the tracks of an enemy tank with a bunch of hand grenades, blowing up the tank and himself. Meanwhile, near the village of Shalty, the team led by Kerimbübü Shopokova, the wife of the hero of the Panfilov Division, grew enough sugar-beet during the war to keep four thousand people supplied with sugar for five years.

"When the enemy withdraws stick your sword into the ground," the Kirghizes say. When the Nazis were smashed, the collective farmers of the Chu Valley—Russian and Kirghiz war veterans—stuck their swords into the ground, exchanging them for ploughs, tractors and grain combines.

Tractors had become a part of Kirghiz rural life long before the war. If you go to the tractor maintenance station in the village of Krasnaya Rechka, ask for Pyotr Biryukov. This man personifies the history of mechanization in Kirghiz agriculture.

In 1928, at the age of sixteen, Pyotr joined the Furmanov Farming Commune, which was organized in Ivanovka, a village close to his native Krasnaya Rechka.

A year later, in 1929, the commune sent him to study at courses for tractor-drivers. As yet there were no tractors in the fields, but the members of the commune knew that a factory was being built in Stalingrad and that they would soon be getting tractors. This meant they had to be prepared.

Pyotr will always remember the day he was called to Frunze to receive a tractor. He drove the machine all the way from Frunze to Krasnaya Rechka. What a triumph that had been! The inhabitants of the villages he passed through poured out of their homes when they heard what has now become a familiar sound. Biryukov had to stop the tractor time and again and answer questions, which he did unhurriedly and with dignity. One detail which he was told set him roaring with laughter and made his triumph complete: hearing the rumble of his tractor and frightened by the wild, absurd rumours spread by the *bais*, a group of superstitious Kirghizes fled to the mountains with their families. Later, the local Agricultural Office formed a special commission charged with finding these nomad families and persuading them to return.

Biryukov reached Krasnaya Rechka late in the evening and turned into his own courtyard. He wanted to drive the tractor through the village in the day-time, but the sound of the machine brought the villagers running in spite of the late hour. Somebody brought a powerful paraffin lamp, and more and more people filled the courtyard. "I had a vicious dog," Biryukov said. "It barked until it grew hoarse and then it quietened down altogether. It got used to people coming

to see the tractor and when anybody came in it only wagged its tail."

When Biryukov rode out into the fields to plough up the commonly-owned land, the kulaks made all sorts of threats. One night they waylaid him in the starlight, threw a jacket over his head and horse-whipped him. Biryukov did not give in. "A tree bends when it is a sapling, but I'll soon be twenty," he said to his friends, and on recovering drove out into the fields again.

This again brings to mind the difficult years in the life of our countryside and before continuing the story about Biryukov, I cannot help but recall Karabalta Shambetov, who was one of my classmates at school.

"O friend of mine! Look me in the face and see how it has become marked by our separation..." With these words Karabalta began a letter to me in 1930. He had been living for six years in his native village after finishing school in Tashkent and was the only Kirghiz Komsomol in the district. From his infrequent letters I knew something of what he was doing. He wrote how he had dispersed the Village Soviet, which was run by the kulaks; how he had taught his father to cook a delicious borsch with sorrel and some other grasses and season it with sour milk and a prodigious amount of cayenne; how, to the uproarious laughter of the spectators, the *bai's* "jester" had jabbed a ram's tail into his own mouth, and rubbed his face with brick-dust, making fun of the boy's habit of washing that he had acquired in Tashkent; how he had learned to drive a tractor from a Russian: who knows but that it might have been Biryukov, who has trained many Kirghizes. "Come to us," Karabalta wrote to me. "There'll always be work for you." And that same year, 1930, I went to Kirghizia.

I arrived at Karabalta's village late at night. In the subdued light of the moon, I saw about me clusters of clay-walled houses with barley and poppies growing on the flat roofs. I went to the first house and called out, but nobody, not even a dog, responded. I went farther. At each house I shouted: "*Joldosh!* Comrade!" But not a sound came in reply. I decided to go into one of the houses. I opened the door, rapped my knuckles on its inner side, then struck a match. The house was empty. I at once realized what had happened. The people had left the village. I stayed the night in that house.

All night I was disturbed by vague misgivings. I went outside several times, listening and deeply inhaling the moisture-laden air rising from the ground. Then I fell asleep. At dawn I was awakened by the neighing of horses and the sound of human voices. I went into the street. Two horsemen were riding past the village, swaying on their trotters. "Camels are resting in the prickly grass, there are grapes in the box, and my black-eyed one is weeping. . " the younger of the two men sang in an undertone.

I stopped the riders. The explanation was simple. The entire population of the village had moved to a mountain pasture with their flocks. I asked them if they knew Karabalta. The men did not reply. The older rider, a thin man, looked fixedly at me and then said simply:

"He is dead. The *bais* killed him. We are on our way to the funeral."

He nodded in the direction of the field, which was bright green with tender stalks rising out of the ground. "Karabalta ploughed that field up with a tractor," he said and then told me that when a tractor thundered across the field in spring the *bais* realized that their power was broken. They tried to win Karabalta over to their side. When that failed they threatened him. And the night before last, Karabalta went to a stream to drink some water and did not return. He was found in the morning with his throat cut.

I went with the two men. The young Kirghiz gave me his horse and got up behind his elderly companion, whom he addressed respectfully as Beishenaly-*agai*. After we skirted round two hills we caught sight of the funeral procession.

Karabalta's body, wrapped in a sack, was swinging on stretchers made of thin spruce poles and branches. Close to a hundred mounted Kirghizes followed the bier. A boy of about ten rode by the side of the deceased, carrying a wreath of spruce branches, which he held above his horse's head. An old red ribbon was twined into the wreath.

"And there are the *bais*!" Beishenaly exclaimed, pointing out a man in a fox-fur cap riding on a horse in the crowd of Kirghizes.

According to custom, Karabalta was buried at the edge of the road. Beishenaly made a speech before the grave was filled.

"Dear comrades," he said, "the *bais* have torn a loyal friend, a fighter out of our ranks. But we shall not weep, comrades. Our grief

is great, but our strength is greater. Comrades, let the tractor be our weapon against the *bais*. We say to them: you are finished. We shall sweep away the *manaps* and *bais* like vermin! Join the Party. Victory will be ours, comrades!"

I shall never forget this speech nor the low brick pyramid over the grave by the wayside lost amid the hills and the clouds.

Twenty-five years have passed since then. In the villages of the Chu Valley, the Russian girls now sing.

*Past our yard the other day
Tractors rumbled on their way.
Nine dozen of them rolled,
Kolkhoz-bodied, kolkhoz-souled.*

The fact that in Kirghizia the tractor has become "kolkhoz-bodied and kolkhoz-souled" is clearly shown, say, by the campaign the Krasnaya Rechka tractor-drivers started against stones, the most terrible enemy of tractors in the Chu Valley.

Sharp or smooth, round or elongated, they lie everywhere. They are cleared off the roads by workers, and wrenched out of the ground by tractor-drawn ploughshares, and the collective farmers put them together in heaps along the edge of the fields. There is enough of this work to last them a long time, for in the course of hundreds of thousands of years fragments of rock have been carried down into the valley by the mountain streams and by the casual hand of man, who needed a primitive millstone, a head for his mace or simply a stone on which to sit in the evenings in a circle of friends.

The tractor-drivers of the central belt of Russia will be surprised to learn that in the Soviet Union there are places where the ploughshares have to be changed and welded on three times a day. In the Chu Valley, ploughshares lose anything up to two hundred grammes of metal after ploughing up a single hectare. Virtually only the stump remains. Every now and again the tractor-drawn plough hits a big stone, which forces it out of the furrow with a sharp clang thus making it leave a flaw.

This state of affairs lasted until 1951, when an engineer from Moscow's All-Union Institute of Farm-Machine Building came to

the Krasnaya Rechka Machine and Tractor Station. He studied the local conditions and proposed a new, unique method of restoring ploughshares. Reinforced by the method proposed by the engineer, the ploughshares were tried out by Biryukov's team and were found to withstand from forty to fifty hours of work. All the other tractor-drivers of Kirghizia are now applying the experience of the Krasnaya Rechka station.

In the valley, Biryukov is known as an indefatigable innovator.

"We are Panfilov's men," he could say of himself though he had never served in the Panfilov Division. During the Second World War he was with a Soviet tank unit in Iran, where he fought a war of a totally different kind, a war against an epidemic of *pappatachi* (a fever peculiar to Asia). But the banner carried by the men of the Panfilov Division brought glory to all the soldiers of Kirghizia, and most of the men who returned to the countryside after victory became machine operatives. And, in the final analysis, it was immaterial in what unit each had served.

Since you, dear reader, have come to Krasnaya Rechka, I shall tell you about Anatoly Chubarov, who was, until recently, the director of the Krasnaya Rechka MTS. His is a truly remarkable life. Before the war broke out he wanted to become an agronomist and entered an agricultural institute. "I want to hear my guitar, whose song is like the song of the scythe." This line from a poem by the Uruguayan poet Enrique Amorim superbly describes what Chubarov felt on the eve of the war.

He wanted to cultivate the land, but the war made him fly in the skies. He was sent to a flying school and became a fighter pilot. The guitar fell silent and cannon began to speak. And the roar of the motor of Chubarov's Il had nothing in common with the song of the scythe. He was shot down three times (the first was during the Battle of Stalingrad). But each time he was back in the line as soon as he would be discharged from hospital. The words of a Kirghiz epic poem can be applied to him—he "fights as though he has a thousand pairs of hands!" His face was burnt but his eyes were unharmed.

The moment the salvo of victory boomed, Chubarov turned his eyes (they are the only parts of his face that have not been disfigured) from the sky to the ground, again sat down at the student's desk, be-



Kurmanbek, a play by K. Jontoshev, at the Kirghiz Dramatic Theatre



The ballet **Anar** at the Kirghiz State Opera and Ballet Theatre

Variety actors from fraternal Uzbekistan perform for the cotton-growers of Aravan District



came an agronomist and then the head of one of the oldest machine and tractor stations in the republic. For many years, whenever some machine and tractor station failed to cope with the plan, the republican authorities appealed to Chubarov for assistance: "Let such and such an MTS have a grain combine for a week. . . ." "Lend such and such a farm a tractor for ten days. . . . We are sure you will manage somehow yourself. . . ." They appealed to him, knowing that he would never hide behind the word "no." Yes, he too can be said to be a Panfilov man.

Chubarov met his comrades-in-arms frequently after the war. At a call from him they would come in their aircraft—pilots of the Kirghiz Air Service—and the roar of their machines resembled (yes, now it somehow did) the song of the scythe. These pilots were air farmers.

In spring, the planes of the agricultural air service fill the sky with the thunder of their motors as soon as the snow melts on the collective-farm fields in the Chu Valley. Their job is to feed the winter wheat with superphosphate. Then when the sugar-beet and the cotton plantations are in leaf, they feed them as well from the air. No sooner does a field of sugar-beet or an orchard become diseased than an aircraft appears over it, flying back and forth and spraying chemicals. Aircraft have come to play an important role in the life of the Chu Valley collective farmers and no longer startle anybody, neither Russians nor Kirghizes.

13. FROM THE CHUMYSH CLIFFS TO ORTO-TOKOI

The Chu Valley derives its name from an extraordinary river, which has no mouth. The Chu River rises in the Tien Shans almost five thousand metres above sea level. Leaping from one rocky ledge to another, merging with other streams, it doggedly battles its way in the direction of Issyk-Kul. Finally, reaching the Issyk-Kul Valley it runs in a bee-line towards the lake. But instead of emptying into it, it suddenly veers aside as though in fright and bursts through the giant mountains out into the steppes. There, deep and swift, it waters a part of the huge Chu Valley, feeding numerous canals and then disappearing in the sands of Kazakhstan.

Prior to the Revolution, water used to be a commodity in Central Asia. People fought over it and even went to war. True, even in ancient times, some of the rulers of Central Asia made their subjects build great canals, but they were too big for the warring feudal lords to come to an agreement about looking after when the sovereign died. After all, it is said that "two rams' heads will not fit into one pot!"

The Socialist Revolution took the rivers from the *myraps*, the "water princes," and gave them to the people. For the first time in thousands of years the war against the desert became a people's war. Soviet irrigation experts and hydrotechnicians started an offensive against the desert on a broad front and the biggest victory of this offensive in the Kirghiz Republic was the reconstruction of the Chu River.

The building of the Chumysh Dam was started in 1930. A concrete coffer-dam was thrown across the Chu River near the naked, porous Chumysh cliffs. Two big trunk canals—the Atbashi and the Georgievka—cut across the Chu Valley. Water was released into these canals in 1934. The Chumysh Dam helped to irrigate nearly seventy thousand hectares of land. This was the first step in the offensive against the Chu Valley desert. When the dam was finished, the hydrotechnicians assisted by the collective farmers rebuilt the old and constructed new irrigation systems on the small rivers running down the mountains into the Chu Valley. Then a general offensive was launched. Construction was started on the Big Chu Canal and the Orto-Tokoi Reservoir.

"We are living in an age when the gap between the most imaginative of dreams and living reality is being closed with fantastic speed," said Maxim Gorky. A dream swiftly becomes reality and for that reason captures the minds of people. Standing with you at the head structures of the Big Chu Canal, your local guide will be sure to describe not only what you see with your own eyes, but also the entire Chu Scheme. However, since the heart of this project is far from here, deep in the mountains, in the Orto-Tokoi Ravine for which we are now heading, we shall continue our story there and at this juncture limit ourselves to a few facts about the canal.

According to the project, the Big Chu Canal will consist of a 175-kilometre-long Western Branch and a 120-kilometre-long Eastern

Branch This will make it about as long as the famous Great Ferghana Canal. In 1941, on the eve of the war, tens of thousands of collective farmers joined in the work and dug seventy kilometres of the Western Branch. Construction was interrupted by the war. But the head structures were finished all the same. They were shackled in concrete and stone. And during the first war-time spring, water flowed to new fields in the Chu Valley. Moreover, one power station after another was erected on the canal and these generated electricity for the factories and plants in Frunze. Several years after the war, columns of excavators, bulldozers, scrapers and other machines once again started to dig the canal.

The great problem was to find sufficient water to fill the Big Chu Canal and the hundreds of thousands of ditches. The fact is that very little water remains in the Chu River during the days when plants are watered, and there was no question of it being enough for the project. The solution lay in Orto-Tokoi, far up in the mountains. So let us turn our car in that direction.

Leaving the head structures of the canal by the Chu Motor Road, we almost at once find ourselves in Tokmak. This town has a bone to pick with the Chu River. Situated on its bank, it was the first administrative centre of the Chu Valley. But for the river, it would probably have retained its importance and perhaps even become the capital of Kirghizia.

In the winter of 1878, ice blocked the river a little above Tokmak and the Chu, overflowing its banks, flooded the town, sweeping away everything before it. The damage was so great that Tokmak had to be almost completely rebuilt. The tsarist authorities decided to get as far away as possible from this unpredictable river and transferred the seat of the administration to Pishpek. Tokmak declined and was reduced to the status of a big village. In 1900, the Chu again attacked Tokmak, and it was only then that the inhabitants decided to build a small dike. As a town Tokmak began to grow again in Soviet years, but there was no longer any question of it being able to overtake Frunze.

Verdant with orchards and vineyards, Tokmak is called the "town of nightingales." On spring nights the riverside thickets and the orchards ring with their ceaseless warbling. But you do not think of

this when you ride past the town. The heavy traffic on the Chu Motor Road reminds you that there is a big motor repair works in Tokmak. Large numbers of trucks rumble towards the Tokmak mechanized creamery, the sugar refinery, and the canning works, which puts out apple-jam, marmelade, tomato sauce, minced egg-plant, canned vegetable marrow and other fruit and vegetable preserves.

As we drive out of the "town of nightingales," and speed farther along the Chu Motor Road, we find the Chu River running towards us, almost next to the road, over the pebbles in a broad floodland. Villages become more and more scarce. Mountains converge upon the road on either side. We bid the Chu Valley farewell and, after a few turns, our car enters the Boom Ravine. There the hum of the motor merges with the rustling of the gravel beneath the wheels and later with the song of a river splashing below.

Before the eye gets accustomed to the huge, bare, ashen-green and purple-blue cliffs surrounding the ravine, two bridges come into view on our left. These span the Chu River. The first, far below the road, is the old Semyonov Bridge, named in honour of Semyonov-Tien-shansky who forded the Chu at this spot during his first expedition to the Tien Shans. The second is a new bridge, which was built at the same time as the motor road to the Chon-Kemin Valley.

Let us stop our car near the bridge, where, rolling across enormous boulders, the Chon-Kemin River joins the Chu in a boiling torrent. "This waterfall," Nikolai Severtsov wrote, "broke and ground the rock from which it fell and was itself exhausted by the effort."

The Chon-Kemin Highway, built in 1935, was one of the first roads cut into the cliffs of the Tien Shans by Soviet people.

The chief means of transport in the Tien Shan Mountains was the Kirghiz horse, which cautiously picked its way over the stone-strewn foot-paths, battled up steep slopes, fearlessly trotted along the edge of abysses and crossed the unsteady logs thrown over raging streams and weighted down on either end with big stones. All the pack roads of Kirghizia were trampled into shape by the hoofs of animals and this is reflected in the Kirghiz word for path, *koi jol*, which means the road of sheep.

In addition to *koi jols*, the Kirghizes spoke of a *kush jol*. This did not run along the ground, but across the sky: *kush jol*, the road of

birds of passage, is the Kirghiz name for the Milky Way. The distance between the road of sheep and the road of stars is the Kirghiz variant of the problem that mankind has pondered over for thousands of years—the contrast between the earth and the sky, between wearisome, joyless reality and a far-away, unrealizable dream.

Uku Tavaldiyev, a superstitious shepherd, who probably lived in fear of the fires of hell and the hair bridge for sinners, was one of the builders of the Chon-Kemir road. Until then it seemed that his life had entered a rut from which there was no escape. Day after day, year after year, he drove his flock to the pastures and his only companion was a whip, which he handled so skilfully that by its sound people could always tell where he and his flock were. Then his life began to change with each kilometre of the new road.

At the first kilometre, trembling with fear, he ignited the fuse stretched to a charge of ammonal placed in a rock and ran for shelter as fast as his legs would carry him, squatted on the ground and closed his ears with his hands, waiting for the explosion with horror. Two weeks later, at the third kilometre, he was already inviting visiting fellow-villagers to watch the explosion and smiled at their fears. At the fifth kilometre, he spelled out the first report about himself in the newspapers. At the tenth kilometre he could already read the newspaper effortlessly and made the road engineers bend over with laughter when he said meditatively: "Fancy, the earth being round though it looks flat." The world turned out to be much more complicated than he had thought. A craving for knowledge awakened in him.

At the fifteenth kilometre, he came to handle ammonal expertly and passed the test for the title of blasting operative. At the twentieth kilometre, he and his team registered the highest production indices and headed the socialist emulation movement among the builders. When all the twenty-five kilometres of the road were cut through the rock and, with a huge crowd looking on, the first truck came to Tavaldiyev's village with wares for the celebrations to mark the occasion, the *akyns* composed the following song about Tavaldiyev:

*A wave advanced towards the hills, a wave of gold.
It sprang upon the rocks, then back it rolled,
And only spray flew bright and gleaming up the paths*

*You brought your grandma satin through the pass,
 Ay, Tavaldiyev, our village-mate!
 You pierced the mountains with a long, long spit,
 And started roasting them like poultry, bit by bit,
 And then the rocks flew up like feathers in the sky
 Until your Granny felt afraid and fit to cry,
 Ay, Tavaldiyev, our village-mate!
 It came nearer every day, that wave of gold.
 It broke right through the mountains and it rolled,
 A river of pure gold, into our market-place,
 And Granny, dear old Granny, ran in haste,
 Ay, Tavaldiyev, our village-mate!
 And Granny came and bought a dozen frocks,
 Ten pairs of shoes and twenty pairs of socks.
 I'm sure she'll buy a dozen thimbles, too,
 And won't we laugh at dear old Granny, me and you!*

This song roamed from mountain to mountain, bringing fame to Tavaldiyev, and the Chon-Kemin road became the road to life for an entire district in the Tien Shans and for scores of the collective farmers who had helped to build it

Many other automobile roads have subsequently been built deep into the Tien Shans. A new railway, the Frunze-Rybachye line, now runs along the Boom Ravine, parallel to the motor road to Orto-Tokoi.

A railway surveying team passed along this same route in 1908, but the opinion was that a railway could not be laid along the Boom Ravine. This expert opinion only makes people smile today, when trains rumble through the ravine and even the birds have grown used to them: the smoke from the engines envelopes them where they sit fearlessly on the boulders.

Let us return to our car as it races through the Boom Ravine. The Chu tears along madly below us, between the rocks filling its bed. Overhead are enormous rocky mountains—sheer walls of dark-purple and dark-green porphyry, black diorite and reddish-grey granite. Here and there rock debris stretch in dark strips on the slopes: pink sandstone and ash-grey rocks. Above the road, a railway winds its way on an artificial “shelf” hewn out of the mountain sides.

And above this "shelf" there are three other "shelves." They have been built to protect the railway against landslides, to catch the rocks breaking off and hurtling from the mountain tops. If the first "shelf" does not stop these rocks, the second or the third will. In the middle of the 60-kilometre Boom Ravine bridges carry the two roads to the right bank of the river and from there they continue normally along the floor of the ravine, parallel with the Chu, whose foaming waters roll between the green, bush-grown banks.

A view of the blue waters of Issyk-Kul opens from the far end of the Boom Ravine. The road to Rybachye runs towards the lake. But our car turns to the right and follows another metalled road to the Central Tien Shans, across the bed of the Kutmaldy (in the Issyk-Kul Valley), through which the Chu empties its flood waters into the lake. Our car again penetrates into the mountains, turning off the Tien Shan highway along the Chu, which boils and foams and roars as it lashes at the rocks and bushes on the banks. Several kilometres farther we enter the Orto-Tokoi Gorge.

It is said that book-keepers have their own poets, who draw their inspiration from the rhythmic clicking of the abacus and regard columns of dry figures as lyrical verses. I am quite prepared to believe this although like many other mortals I have not been initiated into the mysteries of book-keeping and have never experienced that kind of inspiration. But in the life of a people there are events so exciting that each figure describing them is a poem for all. Such an event is now taking place in the Orto-Tokoi Gorge and I shall take the liberty of beginning my story about it with the poetry of figures.

Scientists have calculated that if the waters lost by the Chu River in winter and during the floods were collected, it would be possible to irrigate (in addition to the two hundred thousand hectares the river is already irrigating) an area of nearly one hundred and twenty-five thousand hectares. In other words, the Chu could bring life to more than half as much again farmland as it is now watering in the Chu Valley and in the adjoining part of South Kazakhstan. This gave birth to the idea of building the Orto-Tokoi Reservoir—a giant collector of flood and melt-water—and the two branches of the Big Chu Canal we have already mentioned.

Approximately five hundred million cubic metres of water will collect in the bowl of the Orto-Tokoi Reservoir. A fifty-eight metre dam has already been erected. A tunnel, five hundred and seventy-six metres long giving the water from the Orto-Tokoi bowl an outlet to the river, has already been bored through the rocks. A feed canal joins the tunnel to the reservoir through the rocky walls of the gorge. An emergency spillway has been built to spill surplus water into the Chu when the floods reach a menacing level. A mountain canal has been built in the stone wall of the gorge to protect the reservoir against torrents. During heavy rainfall, the mountain streams sometimes overflow their banks and rush down the slopes carrying rocks and mud. Here is an idea of the damage these torrents can cause. B. A. Lunin, a well-known Kirghiz geographer, tells us that during a heavy, four-hour downpour in the Tien Shans one of the rivers brought down such a huge amount of stones, sand and clay that it would have taken two thousand two hundred and seventy-five goods trains to move the debris. To finish with figures, let me add that all this has been built at an elevation of one thousand seven hundred and fifty metres above sea level: never before have our engineers undertaken so intricate a hydrotechnical project at this high altitude.

I happened to be in the Orto-Tokoi Gorge on the day the tunnel was holed. It was bored from two ends. Syenite, one of the hardest rocks known, was crushed with explosives. Holes were made with drills fitted with pobedite tips: no other metal would have withstood the duty. On the day the tunnel was to be holed, the Orto-Tokoi builders gathered at either end with musical instruments and banners as though it were a festival. Explosions, a whole series of them, sounded dully from the underground corridor. And when the gases dispersed, the people rushed into the tunnel, the two brigades meeting at the breach, shaking hands, embracing each other, their faces wreathed in happy smiles. Soon after that, the waters of the Chu filled this underground corridor.

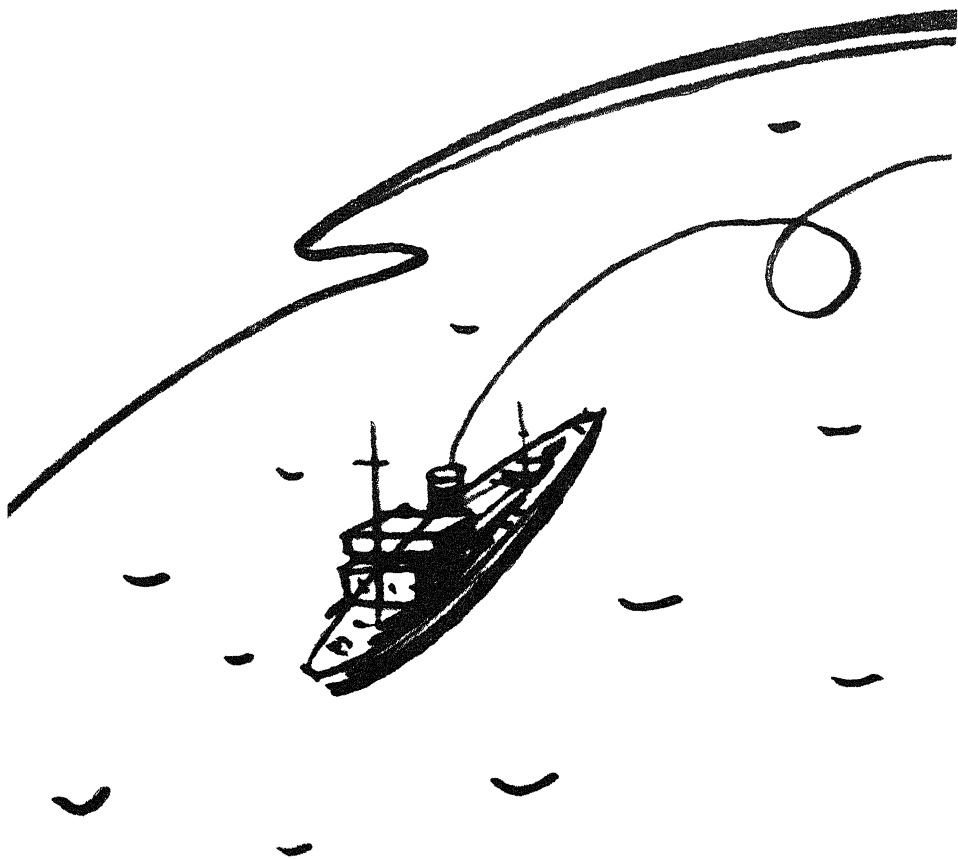
That same day I went to the construction site of the dam. I shall never forget what I saw there. Convoys of dump trucks raced along the dirt roads between colossal heaps of earth. Wherever I turned my eyes I saw excavators, bulldozers, tractor scrapers and 20- and 30-ton rollers. The drone of motors came from all directions, blending

with the gnashing and clanging of excavators, the impatient honking of dump trucks waiting their turn, and the languid, sonorous voice of the river.

Looking at the scene of the construction before him, a young Kirghiz operating an excavator at a control panel said something which cut into my memory.

"I used to think," he said, "that the unbounded world was no bigger than the palm of my hand."

He wanted to say that he could see the whole world from the Orto-Tokoi Dam, from his machine. . . . He was probably right. So far as the Kirghiz people were concerned, that great project parted the horizons to an extent they never thought was possible, made them look attentively at their native mountains and at the life of the other Soviet peoples, and at the struggle waged by Communists of all countries for a creative life for each individual, for human happiness, for peace. Many of the boys born in the Orto-Tokoi Gorge have been given a new name, Tynchtyk, which is the Kirghiz word for peace.



AROUND LAKE
ISSYK-KUL



1. KIRGHIZ SEA

In the bay the waters of the lake flash and sparkle. At the moorage of the river station sailors are swabbing the deck of a freight and passenger motor ship. Near by, on a barge, side by side with new cars, spotted cows are waving their tails. From the stern of a tugboat anchored in the roadstead comes the voice of a Kirghiz sailor singing a love song.

The creak of winches, the intermittent spluttering of a motor boat, the hum of an electric saw and the peal of shipboard bells mingle with this soft, melodious singing and with the rolling of the surf breaking against the wooden piles of the piers. And when for a moment silence descends you can sometimes hear the cry of the mountain duck, which somehow resembles the loud purring of a cat.

On the shore with its carpet of bright grass stand the grey wharf installations; an automatic crane hoists a stack of logs; through the grid of the hoisting machinery everything seems to be moving—the fences, the machine parts covered with a tarpaulin, the heaps of coal and the barrels; the gates of the warehouses open and shut, letting trucks in and out; as though uniting all this into one picture a goods train stands at the landing-stage and receives the golden Issyk-Kul grain from an elevator towering above the port like a huge cliff.

Farther along the shore fishing nets dry in the sun on poles. Meanwhile, the Kirghiz sailor sings his song and it carries far across the water, and beyond the tugboat, beyond the sails of a long-boat furrowing the water, beyond the bay spreads Issyk-Kul. It is bounded by snow-clad mountains that seem to rise right out of its blue waters.

Issyk-Kul! Kirghiz Sea! It is girdled by two mountain ranges, the Kungei Alatau and the Terskei Alatau, which form mighty arcs running from the south and the north. In the Kirghiz language, *kungei* means facing the sun, and *terskei* means one who has turned away from the sun. The lake absorbs the rays of the sun as though it were the gigantic mirror of a solar power installation. The heat that the water gets in summer is enough to prevent it from freezing in winter in spite of the elevation of one thousand six hundred and nine metres. Although Issyk-Kul is only a tenth of the Aral Sea in size, it contains twice as much water. It is seven hundred and two metres deep. Of the lakes and inland seas in Europe and Asia only Lake Baikal and the Caspian Sea are deeper.

In Kirghiz *issyk-kul* means “hot lake.” In antiquity the Chinese called it *Je-hai* (warm sea) evidently because it does not freeze and swans spend the winter on it. Even today, the trumpet calls of the swans may be heard on winter evenings when the roar of the trucks dies down in Rybachye. In winter swans are caught in the lake for zoos because then they are fat and take wing unwillingly. Flapping their great wings, they race over the water, unable to tear themselves away from it, and their feet leave a trail of foamy “pancakes.” Hunters chase them until they tire and capture them alive.

The streams washing the rocks in their path down the mountains dissolve the mineral salts and carry them to the lake. For that reason the water in the lake is saltish and is steadily growing saltier.

The lake is transparent (not at Rybachye but to the east of it) to the extent that fishermen do not have to keep an eye on the sinker: the schools of quick-swimming fish and the worm dangling on the hook are seen quite clearly. Even objects lying at a depth of fifteen metres are made out distinctly. Thanks to this transparency, the sunlight penetrates far into the water and green weeds grow at a depth of seventy metres.

Rybachye is the biggest port on the lake. It is not a big town, the broad streets stretching for not more than three kilometres. As in other towns, the air is filled with the smell of benzine from cars. Sometimes this mingles with the smell of fish but does not kill the smell of hot stones and dry grasses, which is bitter, yet redolent, and makes people feel giddy.

This redolence moves into the town from all directions. The fact is that the western part of the Issyk-Kul Hollow is an arid zone. The westerly wind, which is predominant in this area, carries all the evaporation rising over the lake to the eastern part of the hollow and precipitation is extremely low in the western part. That is why it is so desolate in the environs of Rybachye—there is almost no verdure, and sand and stones stretch as far as the eye can see. The mountains rising in a sheer wall behind Rybachye are likewise arid and stony, and only here and there are they sparsely covered with grass through which the rim of huge layers of multi-coloured shale and sandstone shows.

You may ask how and why a town had sprung up on this desert shore. I remember Rybachye as something like a score of tiny houses, about ten soot-blackened yurtas and a caravanserai, where the Russian peasants who had settled on the eastern shores of the lake were wont to stop their heavy carts and have a cup of tea. Sometimes a camel caravan with merchandise for the Central Tien Shans stopped for the night. In the morning it would push on, the camels moving with measured tread and turning their heads to glance back at their young trotting behind.

In 1926 (this was an event for Rybachye), the first Issyk-Kul steamer, the *Pioneer*, was launched at the far end of the lake, from the Przhevalsk Ship-Building Yard. The vessel did not boast of size. The hull was made of wood, and the keel was nothing but a big Tien-

Shan spruce that had been carted down the mountains at the cost of great effort. But the Kirghiz shepherds gazed at the ship as though it were one of the wonders of the world.

I was one of the passengers on that maiden voyage in 1926. Thousands of horsemen had come to see us off. At the meeting held on the pier in Przhivalsk there were Kirghiz girls swaying gracefully in their saddles, silver coins shining in their hair; mounted young men and elderly women, whose white kerchiefs rivalled the snow on the mountain tops; and sitting their horses proudly in front of them were grey-bearded old men, who in Kirghizia are referred to respectfully as: "He is a wise man. The coat he wears may be threadbare, but words of gold are embroidered on the collar."

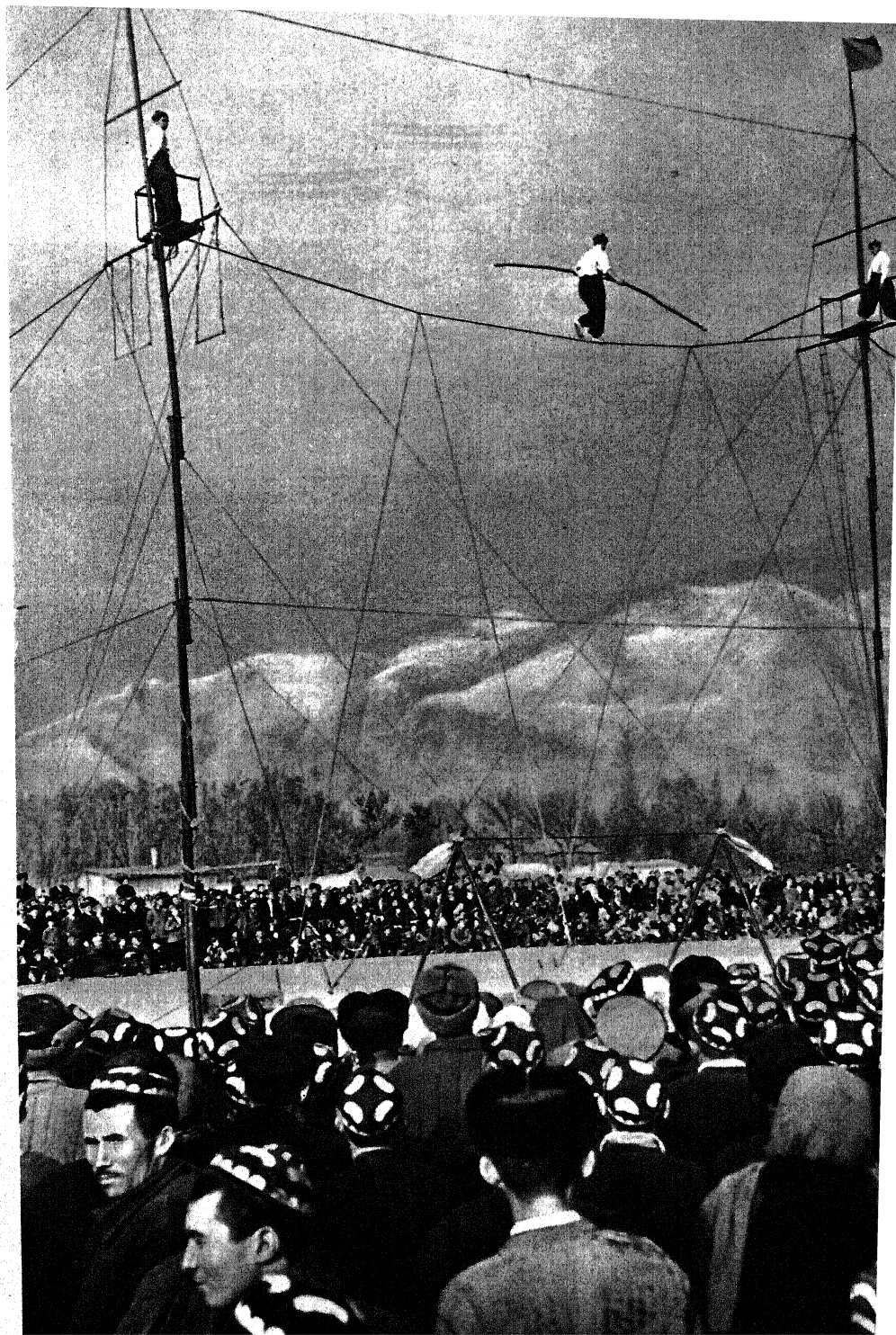
When the *Pioneer*, churning up the water at her stern, began to move away from the pier, cries of delight rolled across the shore, whips came into play over the horses' ears and the entire throng of riders moved along the shore. The shore receded farther and farther away from us, but we did not lose sight of this gay throng for quite a long time.

In Rybachye, at the other end of the lake, we were met by another mounted crowd. The riders held their coats closely about them because of the wind, and their whips hung from their wrists. True, this was a smaller crowd than the one that saw us off, but in those days very few people lived on the desert shore and it was quite a surprise to see several hundred people gathered in Rybachye. There was another meeting when the *Pioneer* came alongside the pier I remember seeing a Kirghiz boy in a felt cap with ear flaps and—what was unheard of in those days—a sailor's suit. Setting the collar right, the mother, an elderly Kirghiz woman, lifted the boy up to the father, who was sitting on a horse. At the sight of the boy's suit, the Kirghiz riders laughed merrily, caught the boy up and began to pass him from saddle to saddle until, with applause ringing all round, he found himself on board the *Pioneer*.

Where is this boy today? Perhaps he is the sailor who is now, thirty years later, relaxing on the stern of the tugboat and singing in an undertone?

Old-timers remember the "era of signboards and offices" that opened in Rybachye after the arrival of the first steamboat. The town

Uzbek circus performers visiting with Kirghiz collective farmers





Alatau Cinema, Frunze

became the trans-shipping centre and a motor-road junction of the rich Issyk-Kul Valley. Almost every house was turned into an office. Some were shared by two or more offices, with the result that they had more signboards than windows. Some of the windows had two signboards over them.

Trucks of the newly-opened motor depots in Rybachye sped across the stony steppe, raising clouds of red dust. The port grew rapidly and began to receive tankers, motor vessels with steel hulls, and tug boats pulling timber across the lake. Houses, dining-rooms, shops, a club, a school and a cinema were built in the town. Then a railway was laid across the Boom Ravine and Rybachye began to develop faster than before. Flocks of sheep, bleating submissively and swaying their fat rumps, moved from all directions to the meat-packing plant. People stopped calling Rybachye a settlement. It was now spoken of as a town.

But, alas, it still has far to go to become a town. It is not sheltered against the cold winds blowing in winter. There are no trees in the streets, nothing to afford a refuge from the burning rays of the sun in summer. To think that this town on the shore of a lovely lake has not a single beach, not even a short "seaside" boulevard. It would seem that there is nothing simpler than to plant a hundred trees or so and put out a score of benches so that people could rest and enjoy the air. Trees grow in Rybachye: this has been proved by some of the townsfolk who grew them outside their windows. All that is wanted is the will!

Most of the people living in Rybachye are truck drivers and their families. It is said that some two thousand trucks pass through its streets every day. In addition, there are port workers and railwaymen and, of course, fishermen,* who gave Rybachye its name. The nets and seines drying on the shore are theirs as are the fishing boats bringing fish to the asphalted piers.

When the *osman* and *marinka*, members of the carp family, are cleaned, the entrails are thrown away: the black peritoneum and the roe of these fish are poisonous, but the flesh, especially of the *marinka* is tender and delicious. Most of the catch in the lake consists of the

* The Russian word for a fisherman is *rybak*.

chebak and the *chebachok*, the Issyk-Kul herring. The interesting thing about these two species of fish is that Lake Issyk-Kul is the only body of water in the world where they are found. The fishermen also bring back *sazan*, which also belongs to the carp family.

Semyonov-Tienschansky writes that during his second journey to the Tien Shans in 1857, his expedition stopped in one of the bays in Issyk-Kul and saw "huge *sazans* splashing about in the water, their beautiful scales glinting in the sun. There were great numbers of them on the very surface of the water and among the thickly-growing reeds . . . We had nothing we could use as rods or nets, but the Cos-sacks waded into the water with naked sabres in their hands and began to cut the fish that were swimming on the surface or had become stranded among the reeds. This improvised method of fishing gave us nearly 400 pounds of fish in about two hours, and we all had an excellent meal." Nikolai Severtsov also wrote that in Issyk-Kul "there are magnificent *sazans*, which are so numerous . . . that they can be speared with lances."

It is hard to believe these descriptions today. The first Russians to come to the lake were also the first to fish there. In those days the Kirghiz did not catch or eat fish, and many of them did not know that fish were edible. Half a century of fishing made the *sazan* a rarity and depleted the stocks of other species of fish in the lake. Back in 1928, Academician Lev Berg, who led an expedition to this area, examined this problem and looked for ways of replenishing the fish stocks in the lake. On his suggestion, nearly half a million trout roe-corns were flown to Issyk-Kul in special refrigerator-planes from Lake Sevan in Armenia in 1930.

Six years passed and in all that time the Issyk-Kul fishermen looked in vain for even a single trout. The experiment was repeated in 1936. This time several million trout roe-corns were brought from Lake Sevan. The fry were hatched in special nurseries and released into the small Ton River, which drains into Issyk-Kul. But these fry also disappeared without a trace. After some time had elapsed, the scientists decided that the second experiment had likewise failed.

Suddenly—this happened during World War II—fishermen from Lake Issyk-Kul sent an unusual fish to Frunze. It amazed everybody.

by its size. It weighed eleven kg. The ichthyologist Professor F. A. Turdakov said that if he had not known the story of this fish he would most certainly have described it as a separate sub-species and given it a name that would show it came from the Tien Shans. The reason was not so much that this was a giant trout (at home in the Sevan it averages about 800 grammes, and only in exceptional cases does it reach four kg.), but that its appearance had changed: the colouring was gayer, new round spots appeared, the forehead was broader and the eyes smaller.

Soon after this, big specimens like the first one were caught in the lake and amateur fishermen began to hunt the trout with harpoons. Incidentally, in Issyk-Kul, the pink flesh of this fish retained the taste that has made the Sevan trout famous throughout the world. Fishermen sought it eagerly but a ban was imposed on trout fishing so as to allow the trout to multiply quicker.

In the evenings, as you walk along the streets of Rybachye, you can, in addition to a Kirghiz song, hear a Russian ditty:

*Sea, O sea, my heart's delight,
Sand like gold, so pure and bright,
Shores of silver, waves of glass,
I miss my boy-friend so, alas!*

The local inhabitants call the lake a sea. "Our grandfathers did not come here to plough the soil, but to fish in the sea," the hereditary fishermen say. Almost all of them are Russian and the grandchildren or great-grandchildren of the peasants who had gone to the distant Tien Shans in the latter half of the 19th century in search of a free life. The saying, "The sea is our field," probably dates from those days.

Like the fields of the collective farms, the blue field of the Issyk-Kul fishermen is steadily becoming "more productive." The Sevan trout was followed into Lake Issyk-Kul by bream from the Aral Sea. Fish-breeders from the Shevchenko Fishing Artel released mirror carp into the Lipenka Creek in Issyk-Kul. Fishing is prohibited in the mouths of the small rivers emptying into the lake. On the Ton River there is going to be a fish-nursery which will give the lake fifty thou-

sand young trout and a million young *osmans* every year. Scientists are planning to bring other species of fish to the lake in the immediate future. These are the pike, the sig (fish of the salmon family) and the *ship* (Aral sturgeon).

As twilight gathers over the lake it turns white and resembles a mirror that had been dulled by time. And then suddenly—yes, suddenly, without warning, at once—a gust of wind blows. Waves wreathed in spray rise in the lake. This is the evening breeze. Half an hour later, the wind drops, the waves quieten down, the street lights in the town come on and it is then that you hear a girl's voice coming from the distance, singing. "Sea, O sea, my heart's delight...."

This inland sea of Kirghizia is an ungovernable, stormy expanse of water. The "breeze" is part of its evening timetable. But then innumerable winds raid the lake from any one of the ravines or from several of them at one and the same time. When fishermen put out in their boats, they have an apprehensive glance for the horizon. No matter how calm the lake is or how limply the sail hangs, the sight of a suspicious bluish cloud with rare little "beards" or a hint of black about it above one of the ravines is enough to make them turn their boats and hurry back to the bays.

But as often as not the storm catches up with them. Mountains of water begin to rise and fall, and the boats rise high on the crests of the waves and then come down again, their noses digging deep into the water and the angry waves rolling across their decks. This is a time when the fishermen have to look sharp, for anybody caught napping is liable to be blown off the boat by the savage wind or swept away by a wave. To save themselves, the fishermen frequently have to throw their entire catch overboard. In Issyk-Kul the work of a fisherman is dangerous and difficult. And although they have grown accustomed to their tempestuous sea, victory against storms always hangs in the balance. The saying here is: "You may return without fish but never without holes in your net." After a storm, the women in all the fishermen's houses bring out their needles and thread.

The most formidable storm winds in Issyk-Kul are the easterly *santash* and the westerly *boom* or *ulan* as it is most frequently called.

When they blow, even the big motor ships seek the shelter of the nearest bay. Sometimes the *santash* and *ulan* rise simultaneously and come to grips in the middle of the lake. When this happens, scraps of clouds race across the water and spin as in a whirlwind, and columns of water, water-spouts, rise to the clouds. Whirling, they speed over the lake until the victorious wind catches them and batters them to pieces

In this combat, it is the *ulan* that is most frequently the victor. In general, as we have already said, westerly winds are the most numerous in the lake and are stronger than the easterly winds: that is why the woman announcer at the radio station on the pier in Rybachye (the westernmost station on the lake) is called the "mistress of storms" by Issyk-Kul sailors and fishermen. Hardly does a gust of wind cause a ripple on the water than the calm voice of the "mistress of storms" sounds the alarm in all the fishing villages, on the steamers, in the buildings of the Przhevalsky pier, and in Grigoryevka on the northern shore of the lake, where the Issyk-Kul fish factory is situated: "An *ulan* is starting!" This means that if you are on shore you must stay indoors, and if you are at sea you must hurry back to the shore.

In Issyk-Kul, as on all other waters where Soviet seamen sail, mutual, comradely help brings people close together. An Issyk-Kul fisherman told me: "There are twelve of us, girls and young men, in our team. We live as one family and share everything: cares, and songs, and storms, and work, and the heart of each is big enough for all twelve."

2. AT THE MONUMENT TO NIKOLAI PRZHEVALSKY

How aerial, how beautiful is the silvery reflection of stars on water. How deeply, how completely you are immersed in contemplation of this light from the deck of a cargo and passenger motor ship ploughing through the waters of Issyk-Kul at night. You peer into the darkness, trying to distinguish the outlines of the mountains, but you do not see them: they have merged so perfectly with the sky that the giant white lace of the glaciers seems to be hanging in the heavens, suspended from the stars.

And in the daytime! How the snaky rays of the sun reflected in the water flash and play on the white ceiling of the deck. How dazzling is the brilliance beneath the side of the ship. You pull your cap over your eyes to be able to follow a sailing boat gliding across the smooth water. You take delight in the panorama of snow-capped peaks reflected upside down in the blue water, and in the wisp of smoke over the funnel of a ship in the distance; transparent, it hangs between two chains of mountains—the mountains with their right side up, and the mountains standing upside down; and far behind you is the smoke of unseen villages on the shore, smoke that resembles tiny sheafs of feather grass.

The long, sparkling wake at the stern curves in a semi-circle when the motor ship enters Przhevalsk Bay.

Sailing boats riding at anchor bow to us. Spots of mazut containing all the colours of the rainbow, toss on the restless water; the reflections of the pier buildings dance in yellow patches close to the shore, and the purple-ash spots are windows and the broken images—the hoisting machines. Gulls sweep low over the surface and all the many colours of the water can be seen in their flying shadows. As the motor ship manoeuvres into position, the sun and the wind pass from one side to the other. The ship at last approaches the landing-stage. We have arrived!

Beyond the pier stands a dust-covered bus which had come from the town: Przhevalsk itself is situated some twelve kilometres away. But the monument to Nikolai Przhevsky, which travellers visiting this romantic corner of the hoary Tien Shans never tire of describing, is here, near the pier, on a high cliff.

The granite rock in the middle of the square looks as if it were a huge wave tossed up by the wind and hardened into stone. A bronze eagle with outspread wings is perched on the rock, giving the impression it is ready to take to flight and make for the summits of the Tien Shans. Beneath its talons on a time-blackened sheet of bronze is a map of Asia with the routes of Przhevsky's journeys, and in its beak it holds an olive branch, the symbol of science's peaceful conquests. The steps cut into the rock allow people to come up and read the simple inscription carved on the stone: "Nikolai Mikhailovich Przhevsky. The first explorer of Central Asia." Above the inscrip-

tion is a bronze medal with a bas-relief of Przhevalsky and a bronze cross.

Beside the monument lies a stone slab, which marks the grave of the explorer. Around it are beds of flowers, garden seats, a park recently planted but already affording shade, and, lastly, the Przhevalsky Museum, which was also opened recently. The Russian explorer, who was born in Smolensk, died here, in the heart of the Tien Shan Mountains in 1888, as he was preparing for his fifth expedition to Tibet.

His companion and pupil, Pyotr Kozlov, who later became a well-known explorer himself, describes how the expedition arrived in the little town of Karakol (now Przhevalsk); how in an order of the day to the expedition, Przhevalsky wrote: "Our journey is beginning. It will be full of hardships but it is an honourable task we have undertaken. Not only the eyes of Russia but also of the whole world are on us. Let us show ourselves worthy of this envious destiny and render science gallant service"; how on the next day Nikolai Przhevalsky ran a temperature and it was found that he had typhoid fever; how a few hours before dying "he regained consciousness and, seeing us gathered around him, spoke calmly and firmly about his approaching death.

"'I am not afraid to die,' he said. 'I have looked death in the face too many times'.

"Seeing the tears in our eyes, he called us women.

"'I want you to bury me here, on Issyk-Kul, on this beautiful shore. And the inscription must be simple: Here lies the traveller Przhevalsky.'"

During the funeral this far-away lake attracted the attention of the whole of the intellectual world in Russia. "I know the place well," Semyonov-Tienshansky said at the commemorative meeting held by the Russian Geographical Society in St. Petersburg. "It has left such an indelible memory in my mind that I can almost see it facing the cherished south from the grave that has just been closed. To the right, the blue, unbounded lake stretches westward. In front towers the mountain wall of the Celestial Range, its unending chain of snow-covered summits forming the boundary of the lake on the right. The farther it extends westward, the closer this snow-white crown

runs to the blue waters, and at its extremity the snow-capped range of mountains seems to drown in the waves of Issyk-Kul. . . .

"This majestic line of giants in snow-white mantles is guarding the grave that is dear to us all, marking the edge of the Russian land. Our glorious traveller went beyond that edge and courageously penetrated into countries about which prior to him little was known to science.

"Go to his grave, pay your tribute to this beloved shade, and it will readily give you all its simple arsenal of weapons, which consists of spiritual beauty, infinite valour, love of nature and of science, supreme human genius, and ardent and boundless devotion to country."

These words sound as if they were uttered today, addressed to us. They may be uttered as a salute to all great Russian explorers of the Tien Shans, the first of whom was Semyonov-Tienshansky himself. It is about these travellers that I should like to tell you as we sit on a bench near the monument to Nikolai Przhevalsky.

For many centuries, the Tien Shan Mountains, enveloped as they are in legend, were one of the most remote and least known places in the world. The Chinese traveller Hsüan Tsang made a journey to these mountains in the seventh century. He wrote. "These mountains stretch for thousands of leagues; among them are several hundred tall peaks; the valleys are dark and full of precipices. The snow that has accumulated here since the creation of the world has changed into ice rocks that do not melt either in spring or summer. There is a strong cold wind and travellers are molested by dragons." In his description of Issyk-Kul, Hsüan Tsang wrote "Dragons and fish live there together."

Until the mid-19th century descriptions of this kind by Hsüan Tsang and by earlier Chinese travellers were almost all the information the world had had about the Tien Shans. Right up to the eighteenth fifties these mountains were never referred to simply as "the Tien Shans," but always as "the mysterious Tien Shans." This shows how little was known about them. The famous explorer Alexei Fedchenko used to say: "Cartographers were in despair when they had to depict this part of Asia and, drawing God knows what, made the reservation that 'we know the surface of the moon better than this region.'"

On the strength of ancient Chinese manuscripts, Baron Alexander von Humboldt, the great nineteenth-century German scientist, was convinced that the Tien Shan Range was a chain of active volcanoes. This belief was so strong among the scientists of his day that when Pyotr Semyonov prepared for his first expedition to the Tien Shans, he made a special trip to Italy, where Mount Vesuvius was then erupting, and spent several months studying volcanic rock.

In 1856-57, Semyonov made two daring journeys far into the Tien Shans. The first expedition reached Issyk-Kul. The scientist wanted to investigate the lake in detail, to study it, but the expedition was small and there was the danger that warring Kirghiz clans might attack it. So on the same day that it reached the lake, Semyonov led it back across the mountains.

The following year he returned with a big expedition, going to the far shore of the lake and penetrating so deep into the knot of mountains that he saw the ice pyramid of Khan Tengri with his own eyes. This expedition was very fruitful for science. Humboldt's notion about the volcanic origin of the Tien Shans was torn to shreds. Semyonov laid the beginning for a profound study of the Tien Shan Mountains, their geography, geology, fauna and flora. His *Travels in the Tien Shans* has become a reference book for every geographer.

Semyonov was a scientist who had the gift of forceful and poetical description as, incidentally, had many of that brilliant galaxy of Russian explorers who, like Semyonov, blazed the trail to the mountains of Middle and Central Asia. Returning from his journeys, Semyonov wrote enthusiastically that the gigantic chains of the Tien Shans "rising from the zone of apricot and pomegranate trees, rice and cotton to far beyond the snow line merit the same, if not more, scientific attention as the interior of Africa." His contemporaries placed great value on the importance of his investigations in the Tien Shans and the fiftieth anniversary of Semyonov's expedition was marked on a big scale. At the celebrations the explorer was officially given his double name—Semyonov-Tienshansky (Semyonov of the Tien Shans).

These fifty years were a remarkable period. In the course of that half-century Semyonov was followed to the Tien Shans by many Russian explorers. The first was Nikolai Severtsov, who, like Semyonov, reached Issyk-Kul and described it with artistic force.

In *Travels Across Turkestan* he describes the Tien Shan plants, animals and birds, unknown to science in his day and, pondering over them, argued with the Russian science of that age, giving countless facts to confirm the principles of Charles Darwin's teaching, which had only then found its way into Russia and was given a hostile reception by most of the scientists. Severtsov's monograph about the *arkhars*, the Tien Shan mountain sheep, was the first Darwinist work to be written in Russia. There, deep in the Tien Shan Mountains, which were wild and undeveloped in those days, the foundations of a new natural science took shape

During our journey across Kirghizia we shall frequently mention the names of other travellers who explored the Tien Shans: Alexei Fedchenko, who described the Alai Mountains and the Alai Valley, Ivan Mushketov, who started the geological study of the mountains of Central Asia, the geodesist A. F. Golubev, the geographers M. I. Venyukov and G. Y. Grumm-Grzhimailo, the botanists S. I. Korzhinsky and V. V. Sapozhnikov, the soil scientist S. S. Neustruyev and many other Russian scientists. It was due to Russian scientist-travellers that the small town of Karakol on the eastern shore of Issyk-Kul came into being

The founding of this town is connected with the following event, which took place in 1869. That year a party of Russian topographers headed by A. V. Kaulbars, well-known for his investigations in the Central Tien Shans, had for several months been making a detailed survey of the locality, drawing the plan for the future town. The happy day came when the survey was finished and the completed maps were in the expedition's yurt.

It was a glorious day. But the night that followed was terrible. A squall blowing from the mountains swooped down upon the yurt of the topographers, overturning it. The tables, chairs, blankets, pillows and clothes of the sleepers were snatched up by the wind and carried away into the darkness. But the worst thing of all was that the maps, drawings, papers, all the work of the expedition, had disappeared. When, half-dressed, Kaulbars and his companions, calling to each other in the night, gathered together after the first bursts of the squall, the situation became clear: an irreparable disaster had overtaken them—all their work had been brought to nought.

In the morning a large group of mounted Kirghizes rode up to the expedition and offered their assistance. Forming a long chain, more than a hundred riders moved towards the Jergalan River, in the direction the storm had taken, and combed every inch of the ground. Within four hours they recovered not only the belongings but also all the plans and surveys. Only a few sheets of paper, probably caught up and carried away by the river, were not found. Recalling this incident, the inhabitants of present-day Przhevalsk say that the friendship between the Kirghizes and Russians lies in the very foundation of their lovely town.

It was at first named Karakol. Then Nikolai Przhevalsky stopped in it.

*He passed along rivers, through mist did he grope,
The ways of the pheasant he watched on the slope,
Breathing the flower-scented wind of Tien Shans,
He listened to ditties of old Kirghizstan,*

wrote the poet Kubanychbek Malikov in "To the Monument to Przhevalsky." And further.

*As the flap of a yurta before morning is furled,
So he made our country known to the world,
The first to descry its young face.*

A fastidious critic might say that the poet was wrong, that it was not Przhevalsky but other Russian travellers who acquainted the world with the land of the Kirghizes. Przhevalsky told the world about other lands, and Issyk-Kul was only the starting-point of his travels in Central Asia. Although such is really the case, the poet was right nonetheless because the monument to Przhevalsky is, in a way, a monument to all the Russian explorers of Middle and Central Asia.

The last of the galaxy was Academician Lev Berg, who began a profound and all-round study of Issyk-Kul long before the Revolution, explaining its origin and describing its hydrobiological properties, vegetable kingdom and fish. We say the "last" of the galaxy, because the name of Berg closes a period in the history of Russian

geographical science when it was pushed ahead chiefly by travellers working singly, at their own risk and on their own responsibility. In another respect, Berg can be called the "first," because he heads the list of brilliant scientists, who, after the Revolution and thanks to it, began a systematic study of the land they live in.

Shortly before Berg died in 1946 he sent a letter to the Departments of Geography and Natural Science of the Kirghiz State Pedagogical Institute in which, as though speaking on behalf of the first generation of Russian explorers of the Tien Shans, he wrote: "I envy you the opportunity of working in so attractive a country for the naturalist as Kirghizia." This letter should be displayed at the entrance to the Kirghiz State University, which developed out of the Pedagogical Institute, so that it would constantly remind the students that they live in a country where the opportunities for scientific investigation are boundless

3. FROM PRZHEVALSK. . .

Przhevalsk! People who visit it carry away an unfading memory of a winsome little town built by fits and starts, but arranged charmingly. Even the small, whitewashed houses, which would not have made an impression anywhere else, bewitch the visitor. That shows how admirably the site had been chosen.

The short verdant streets (the town, it must be said, is splendidly planned) are hemmed in at either end by mountains: at one end—snow-capped, very picturesque and very close; at the other—dark and still closer, beginning right where the streets terminate. The sun-flooded, transversal streets run down into the valley, giving a view of what for a town are boundless, breath-taking spaces. As you look at the view from the end of any one of these streets you begin to wonder if you are not looking through a stereoscope.

The weather too gives the town unusual effects. While the sun is shining brightly over the town, the sky above the mountains is sometimes overcast, and shaggy clouds tear away from it, fly towards the town and, rapidly growing brighter, race over the gardens and streets. Or at night, when the sky is studded with stars, lightning

keeps flashing in the distance, showing that a thunder-storm is raging in the mountains. Then again take the morning mist, which sometimes comes right up to the windows of the houses from where it is dispersed by the first rays of the sun

Griffons float in the sky above Przhevalsk. Apricots and plums ripen in the gardens round the houses. Pink and blue hollyhocks, the most popular flowers in the town, peep over the fences. The *ariks* are lined with poplars; the trunks are so thick (as much as four to six arms' lengths in circumference), they grow so close to each other, and the pale-green foliage begins at such a height that you get the impression there is a white wall. The size of these Turkestan poplars astounds newcomers.

At midday the heat is intense and at other hours as well it is so hot that wherever possible people try to keep in the shade. For that reason, although there are pavements, there also are well-trodden paths along every fence and beneath the trees along the *ariks*. Among the flowers, the eye cannot fail but pick out the bugloss, which was first brought from the North Caucasus at the turn of the century by General Korolkov. All the mountains around Przhevalsk are now blue with these flowers

General Korolkov is one of the most colourful figures in the history of Przhevalsk. He settled in the town in 1881 and until his death was in charge of the agrometeorological station, founded by the Russian Geographical Society. In those days Przhevalsk was a town "on the edge of the world." The writers G. Alexeyev and V. Popov tell us that "... it was an event for Karakol every time the vodka caravan came in. The *jigit* sent out specially as a scout would gallop back like the wind with the news that vodka was coming. A brass band and a delegation consisting of officials and leading residents would go out of the town to meet the transport. The delegation had the right of draining the first tumbler." Yes, life must have been dull in pre-revolutionary Przhevalsk.

Envy was the usual companion of the old provincial life. "The neighbour takes his neighbour's chicken for a goose." We can easily imagine what the attitude of Przhevalsk folk was to a "neighbour" who began the day by taking down the readings of meteorological instruments, a man who brought rare plants to the town and from

time to time received world-famous travellers in his house. Envy gives birth to scandal. But Korolkov had nothing but disdain for scandal. This explained the truculent, haughty manner in which he spoke to all and sundry, and his habit of always differing with people on any question. In its way, this was a challenge to provincial society.

Take, for example, the Kirghiz uprising of 1916. Korolkov was the only Russian army officer in Central Asia to protest against the punitive acts of the tsarist officials. He even wrote a sharp letter defending the Kirghizes. For an individual of his kind, the tabs of a general were a writ of immunity.

Back in 1902 Korolkov and two of Nikolai Przhevalsky's closest associates, P. K. Kozlov and V. I. Roborovsky, founded a public library, the town's second cultural institution. Korolkov helped to plant the town park. Make a point of going there. Tall and magnificent, the Tien Shan spruce, the Russian birch and the Siberian larch are a pleasure to the eye.

In Przhevalsk Korolkov was a lone intellectual. Today there is a network of scientific and cultural institutions in the town: a teachers' institute, a pedagogical, a medical and an agricultural schools, three community centres, six clubs, three public libraries, the Issyk-Kul Cinema, a dramatic theatre, hospitals, polyclinics, out-patient clinics, the Przhevalsky Museum of Local Lore (which occupies the house where the explorer died), meteorological, seismic, and fruit-and-vegetable scientific centres, a medicinal plants centre (which grows and studies the opium poppy, ginseng, and other medicinal plants) and, lastly, the Przhevalsk base of the Kirghiz State Plant-Breeding Centre, which is famous for its varieties of wheat—batkan red and batkan white.

Do not look for the word "batkan" in a dictionary. It is made up of two Russian names—Batalyov and Kantemirov. The agronomist Batalyov or, to be more exact, the agronomists Sergei and Nadezhda Batalyov, who are very well known figures in Kirghizia, came to Issyk-Kul thirty years ago. They were the first agronomists on the shores of the "Kirghiz Sea" and spent many years improving the wheat grown in that area. The story about Nikolai Kantemirov, who is also an agronomist, is that while in Eastern Germany during the Second World War he plucked a few ears of wheat that amazed

him for their size and weight, and brought them home to Issyk-Kul in a pocket of his army tunic. There he sowed them and reaped a "harvest" of something like a hundred grains. Soon after that he was transferred to Przhevalsk. He gave the handful of grains he had grown to the Batalyovs so that they could continue what he had started. Sergei and Nadezhda sowed the grains and nurtured the plants. Then they crossed them with other varieties, breeding in this way two new and very productive varieties of wheat with thick stalks that resist winds and yellow rust. Thus were born the batkan red and the batkan white.

The eastern part of the Issyk-Kul Valley is densely populated. This is especially evident if instead of taking a boat, you go by motor-coach along one of the two highways fringing the lake from the north and from the south. The northern road is the better of the two. At first the villages are small and few and far between. The rocks of the Kungei Alatau bear down upon the highway close to the lake. For a short stretch of the way, the coach speeds along the line of the shore, and racing beside it is the reflection of the sun in the water, elongated on the waves, and round and blinding between them.

Then the mountain range recedes to the left. You find the villages becoming bigger and bigger until they turn into an unbroken chain of settlements. Fields of golden wheat and the blue lake are seen through the spaces between the houses and trees. Here and there, the coach passes blue fields of poppy and yellow "islands" of sunflowers.

At the eastern end of the lake, your coach turns south to Przhevalsk and passes the big village of Tüp. Undulating and cut up by hills and streams, the valley broadens out, and fields under grain extend across the hills and hollows. The wheat is tall enough for even a rider on a small Kirghiz horse to hide in it.

Between the Tüp and Jergalan rivers, the highway cuts across the Sukhoi Khrebet Peninsula, which juts far out into the lake. Only recently Sukhoi Khrebet (Dry Mountains) was waterless and barren, yet today it is covered with orchards and oak woods, and a windhover, resembling a hawk with its ochre-brown breast and an ash-coloured tail, circles above the gold of the wheat; folding its short wings, it drops like a stone into the wheat and then glides up into the air again, a field-mouse in its beak. The Sukhoi Khrebet State Farm has built

an irrigation system on the peninsula and the Dry Mountains are no longer dry.

A lighthouse can be seen at the very tip of the peninsula, where waves break against the rocks sticking out of the water. Years ago the keeper of this lighthouse, Gavriil Kulagin, set out to prove that resourcefulness and hard work would make fruit and vegetables grow even on the loose sand of the shore. He fenced off a plot of land with *jerganak* bushes, cultivated it and now grows pumpkins, muskmelons, several varieties of water-melons, cabbage and onions. In addition, he gets two potato crops from his sand every year, each bush yielding almost a pail of potatoes. In terms of hectare units, his harvest of tomatoes is sometimes as much as 110 tons! Grapes, currants and apples grow and ripen in his orchard.

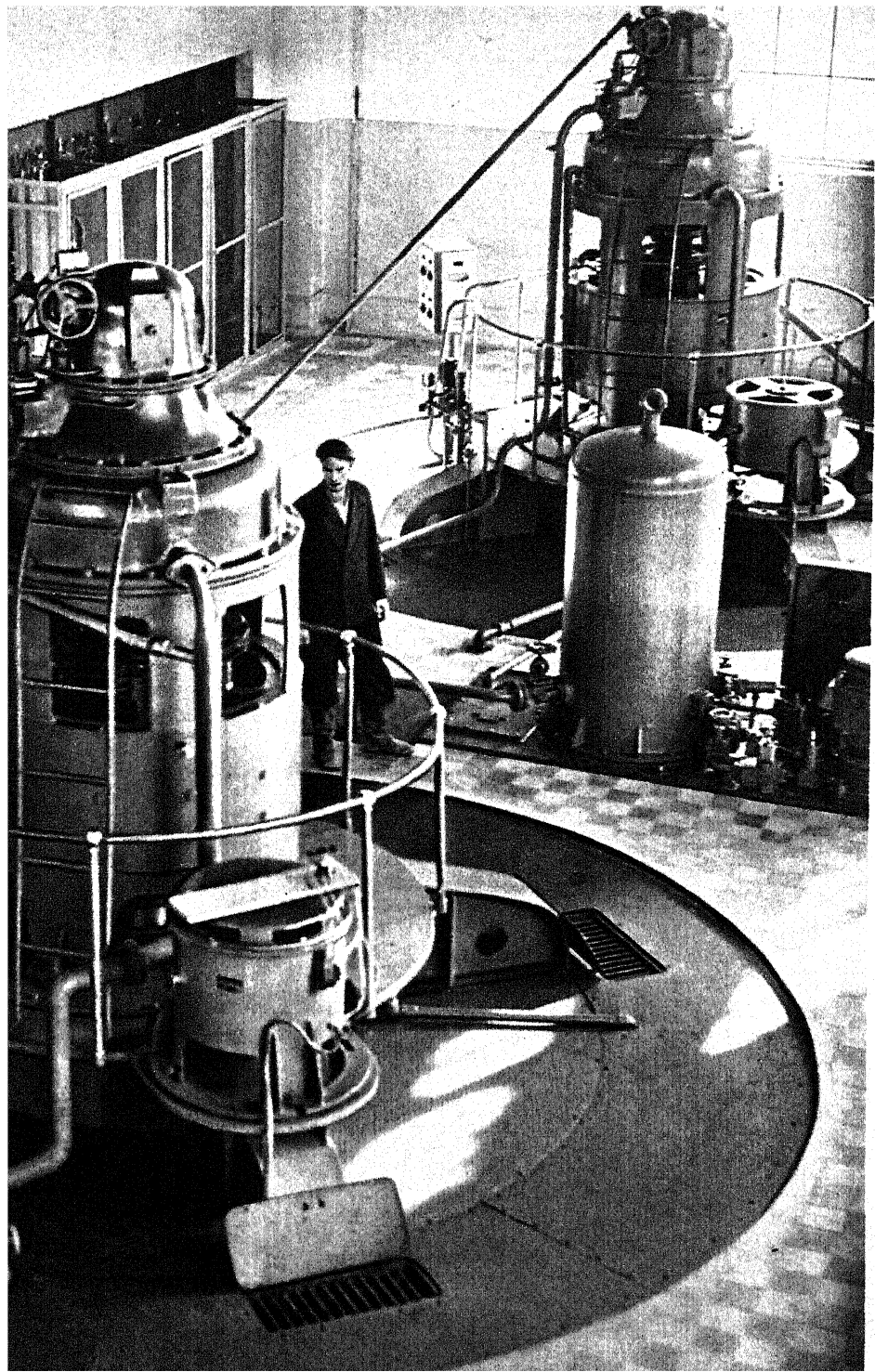
In the eastern part of the Issyk-Kul Valley you will find people in every village who are enriching this corner of the Tien Shans with new plants, developing waste land, and devising new techniques. They are the people who made sugar-beet and the mulberry-tree widespread here.

The best route from Przhevalsk is through the Santash Pass, which separates the Issyk-Kul Hollow from the eastern-most valley in Kirghizia, the Karkara Valley. The popular name for it is "milk valley," because great herds of dairy cattle graze there. The biggest butter and cheese works around Issyk-Kul is situated near the pass. This works is completely mechanized. A mound built of stones towers in the pass itself. There is a legend about this mound. When Tamerlane set out to fight the pagan mountaineers he ordered his warriors each to take a stone and leave it in the pass. A mountain of stones arose. After defeating the mountaineers, Tamerlane's host returned and each warrior retrieved his stone and carried it to Samarkand. When the last warrior took his stone, the mountain was still there, for the stones of the warriors killed in the battle remained. The dead had thus erected a monument to themselves.

At this war memorial you involuntarily begin to meditate upon war and peace. To this day there are "heirs" of Tamerlane who seek glory for themselves along the paths of war. There is a derisive adage in Kirghizia which says: "If you have failed to win fame, set fire to the earth." Like all the other Soviet peoples, the Kirghizes have no

International basketball game between women's teams from China and Kirghizia





Machine hall in a hydropower station on the Chu Canal

reason for setting the earth on fire. They are engaged in peaceful endeavour, clothing their mountains with orchards, fields and villages, flooding them with electric light, building a new life for themselves and their children.

4. IRDYK

"Anything that is wrested from a state of repose emits sound. Grass and trees are soundless, but when a wind blows they rustle. Water is soundless, but a wind makes it roar. Metal and stone are soundless, but strike them and they will ring. So it is with man! When he has no other way—he speaks. His songs contain reflections, and there is meditation in his weeping. All that comes as a sound from his lips shows that he has been shaken out of a state of repose." It is hard to say what feelings crowded into the breast of Vanakhun Mansuza when he wrote these words of the Chinese classical writer Han Yü into his notebook.

We can only guess, because Vanakhun Mansuza of the village of Milanfan, Chu Valley, is no longer among the living: he was killed in battle against the Nazis and was posthumously given the title of Hero of the Soviet Union. But if we recall that Vanakhun was a Dungan, and then revive in our minds the history of Soviet Dungan, the above words will set us thinking.

We shall start our acquaintance with the Dungan people by looking over a small wooden mosque in Przhevalsk. It is a masterpiece of Dungan architecture. The carved frieze is of fine workmanship, and the most curious thing is that in it a benevolent folk symbol—the pomegranate, a sign of longevity—is mixed with purely Buddhist images: a shell and a wheel of fire. The heads of monsters look down from the ends of the corner beams. In short, the mosque is strongly reminiscent of a Buddhist temple.

Let us recall what Buddhist philosophy wanted of man, what it depicted as supreme happiness. Repose, the suppression of all desire, complete cessation of movement of life, the dissolution of man into infinite "nothing." For two and a half thousand years, this philosophy, cleverly utilized by the rich, retarded progress among the peoples professing Buddhism. After all, if repose is supreme happiness,

why should man strive for something, seek to change anything, "wrest himself from a state of repose," weep, sing.

Like the entire Chinese people, the Dungan—*chung yuan jen*, dwellers of the middle plain—sang and wept, grew fruit and fought for happiness, for freedom. But in spite of the fact that the Dungan had adopted Mohammedanism several centuries ago, Buddhism left an imprint on their outlook. The heads of monsters, which in China were called upon to cow the poor man who tried to lift up his head, frightened them as well.

In China there are millions of Dungan (Chinese Moslems). But how did they come to live in Kirghizia? The people best qualified to tell us this are the Dungan themselves. Let us drive out of Przhvalsk to the Dyishin (Victory) Collective Farm. The farmers have planted poplars on either side of the road to the farm and, after the style of the Chinese, call it "the road of poplars." Running past poppy plantations dotted with snow-white flowers, the road of poplars takes us to the village of Irdyk, where tidy, white cottages show through the greenery of shrubs and trees. Here the houses are called *fanzas*. But there is so much of the new in their appearance that the word *fanza* can scarcely be applied to them—they have iron gable roofs, aērals, electric wiring, and big glazed windows with cars parked near them. In Irdyk, the old, national features of the Dungan have mixed, merged with the new life.

Metal ear-rings—*erchjuiza*—shaped as bats shine in the ears of a girl playing volleyball. In one of the *fanzas* a schoolboy is sitting over a problem in trigonometry; near by, his mother is ironing clothes with an electric flat-iron, and a loudspeaker, carrying a broadcast from the collective farm's radio station, is filling the room with the strains of an old Dungan song, *The New Moon Is Illumining the Vale of Flowers*. It is sung by one of the collective-farm girls to the accompaniment of a *sianshanza*, a *pizzicato* musical instrument with a square, snake-skin resonator:

*In a silvery looking-glass love breathes its last.
Nevermore will I see him, the days of delight are past.
The steam from the black tea circles woefully over my cup
Like bitter almonds taste the tears that unceasingly well up*

In the little garden in front of the house, tractor-drivers and the collective-farm team leaders have gathered for a production conference, and the gaze of the speaker wanders about the *huahan*—beds of roses, hollyhocks and geraniums enclosed with a Chinese latticed fence. Near by, in a sand pit, where tiny tots play in the mornings, are half-buried little red, green and yellow wooden moulds, obviously from a toyshop, and among them a *tenza*, a Chinese oil lamp given to the children because there was no further use for it: all the houses in Irdyk have electricity.

Walk into any of the houses. You will be struck by the abundance of embroidery. The mistress of the house will be quite pleased to explain that the peony and frog (symbols of riches) and the duck and drake (symbols of happy wedlock) were embroidered by her mother-in-law, while she herself embroidered the bamboo, pine and peach (symbols of longevity) for her son, who has won the degree of candidate and is now in Moscow. Her daughter embroidered the fish for her father, wishing him success in his work at the collective farm. You are smiling? The mistress of the house will smile wisely in reply. It is not the symbols that count. What counts is folk tradition, its poetic force, which makes life cosier and work more joyful.

After your hospitable host has placed refreshments cooked in the Dungan style before you and has satisfied himself that you can eat no more, he will at last tell you the story you have come to hear.

"It is better to fall fighting than to stand with your hands tied." A hundred years have not yet passed since these winged words flew all over the three western provinces of China (Shensi, Kansu and Ningsia), when the people rose against the rule of the Manchu dynasty which had kept them in hunger and poverty. In those days the whole of China was "wrested from a state of repose" The peasant revolution, known to the world as the Taiping uprising, raged for fourteen years (1851-64) in the south and east of China. This uprising was crushed by American and British cannon. An uprising of Dungan, which Soviet scientists call the second wave of the Taiping revolution, broke out in Western China in 1862. It too shook the empire for more than ten years.

There were years during the Dungan uprising when, as it is said in China, the stuffing came out of the Manchu emperor's New Year

dumplings: the break-up of the empire seemed imminent. We shall not stop to describe the uprising. "you cannot wrap fire in paper"—one page is not enough to convey the passions, the sharpness, the drama and the complexity of that long and bitter struggle. At the moment we are interested in the last page of the Dungan uprising, when it was already doomed and China heard the name of the national hero Pi Tang-hu.

Pi was his clan name, and Yang-hu a nickname meaning Desperate Tiger. The Manchus called him Ta-hu (Big Tiger). Drawn into the uprising by the scale on which it had begun the Dungan feudal lords tried for a while to clothe it in the garment of a Moslem holy war, then bribed by the emperor and frightened out of their wits by the democratic ideas of the peasant revolution, they finally betrayed the insurgent peasants. Pi Yang-hu remained faithful to the people during these tragic days. The peasants flocked to the banner of the Desperate Tiger and the uprising flared up again with renewed vigour.

"Man is born of woman and dies for the people!" Pi Yang-hu is said to have uttered before flinging himself into one of the battles. It is difficult to say whether he believed in success. The uprising, we now know, was already living out its last days. the emperor's army outnumbered the forces of the revolution almost a hundred to one. After a series of successes, Pi Yang-hu suffered a crushing defeat and the peasants of his Shensi detachments began to disperse home. The Desperate Tiger himself, retreating and giving battle with a few thousand men, each of whom had the threat of torture and execution hanging over him and his family, in the end found himself in Sinkiang, the westernmost province of China, at the foothills of the Tien Shans.

The fugitive force set out for Kashgar, to the ruler Yakub Beg, who had promised them refuge. But on the way Pi Yang-hu accidentally learnt that Yakub Beg was planning to surrender his head to the Chinese emperor for two hundred thousand lams of silver. Such was the unprecedented (even for China) price put on the head of the Big Tiger: the emperor still fancied he saw the flames of the peasant revolt, and the vanquished leader of the insurgent Dungan still struck terror into his heart. The position of the fugitives seemed hopeless.

It was winter Pi Yang-hu and his followers were in a closed triangle on one side there was vengeance, on another treachery, and on the third white death, for the ice-bound chain of the Tien Shans is impassable in winter. The Desperate Tiger chose to do what nobody had done before him: he decided to try and cross the Tien Shans in winter with his followers and their wives and children.

They were successful, but they paid a high price for this success. By the time they reached Issyk-Kul and then the Chu Valley their clothes hung in shreds like wool on sheep, almost all tottering from exhaustion and gravely ill. Many did not complete the journey, dying on the glaciers, perishing from the frost, from hunger, and many others were buried alive by avalanches. Those who reached their destination would probably have perished as well had it not been for the traditional hospitality of the Kirghizes and the warm assistance of the Russians. The feldscher Vasily Frunze at once went to the Dungan camp, organized rescue teams that went to the mountains, and personally treated hundreds of people. To this day Soviet Dungan, the grandsons of the Shensi insurgents, revere the memory of Frunze senior as much as they do the memory of Frunze junior.

As soon as the Dungan crossed the border into Russia the Chinese emperor demanded the extradition of Pi Yang-hu. But neither the Manchu nor the European embassies in St. Petersburg succeeded in getting the Dungan leader extradited.

The chief reason for the tsarist government's refusal to give up Pi Yang-hu was that Russian public opinion was strongly against it. An expedition headed by Nikolai Przhevalsky had been in Kansu Province during the Dungan revolt. The famous Russian explorer and his friends told the world about the heroism of the insurgents and the atrocities perpetrated by the emperor's troops, and won deep sympathy for the Dungan in Russia. The tsarist government could not afford to worsen the already strained atmosphere in Russia by mixing in "Chinese affairs" that did not concern it.

But the emperor refused to resign himself to this. Men hunting for the head of the Dungan leader began to infiltrate into the Chu Valley. Devoted comrades-in-arms vigilantly guarded the Desperate Tiger, who was peacefully tilling the soil, letting water into the irrigation ditches and growing rice. Watching this toiler many people did not

suspect what a tense struggle Pi Yang-hu and his friends had to wage day after day. How fierce this struggle was became known several years later, when Pi Yang-hu died.

He died in August 1882. The morning after the funeral Pi Yang-hu's grave in the Pishpek cemetery was found to have been desecrated and a dummy lay on the ground near it. The Chinese emperor's spies had hunted even for the dead head of the Dungan hero, but cautious friends had buried a dummy in the cemetery. Pi Yang-hu was buried elsewhere. The whereabouts of his grave remains a secret to this day.

The descendants of the Shensi insurgents, who built a new home at the foothills of the Tien Shans, show a keen interest in what is taking place in China. One of them, Losaza Mada, member of the Dyishin Collective Farm and inhabitant of the village of Irdyk, chanced to be in the land of his ancestors during the Second World War. As a soldier of the Soviet Army he participated in the march across the Great Khingan Mountains and helped the Chinese drive out the Japanese. In China he made life-long friends.

In a village in North China, Mada told the peasants about the Dyishin Collective Farm. The peasants who gathered to listen to him were poor people, dressed in sacking, emaciated, and exhausted by the levies that had been exacted from them by the Japanese invaders. The patches of land on which stunted poppies and undersized cotton bushes grew were as pitiful a sight as the peasants themselves. The primitive wooden plough was the chief farming implement. How was Mada to convince these uninformed, superstitious and distrustful people that what he told them about his collective farm was the truth? He had to call to mind thousands of minute details and use all his experience to show these people that he was telling them the truth.

As he spoke of the Dyishin Collective Farm, Mada himself saw his own country in a new light. Little things, which at home everybody took for granted, acquired immense importance here in this village in North China. More than that, these little things seemed to take on the quality of the miraculous. There was magic in commonplace words like collective-farm power station, collective-farm club, nursery school, medical-aid station, library, collective-farm creamery, electric mill—in everything that had become a part of life at the Dy-

ishin Collective Farm Mada told his listeners that in Irdyk winnowing machines are powered by electricity. He told the Chinese peasants about the electric transmission lines carrying power for the threshing machines at the collective farm's two threshing-floors, and described how in his village cows are milked and sheep are sheared with the help of electricity.

Then he suddenly found that he had made a mistake. He had scarcely started to speak about his work at home, about harvests of medicinal poppies, than his listeners began to exchange distrustful glances. Where the matter concerned farming machines, they could believe the story—there was no telling what wonders there were in the world! But nobody could be made to believe that the poppy, which they grew with their own toil-hardened hands, could yield tens of times more juice per *mu* than they were getting from their own fields. When Mada finished his story, one of the peasants said:

"Listening to you even a nightingale will fall off the bough in surprise."

Embarrassed and feeling awkward, as though he were a liar, Mada took his leave of the peasants of this village. He did not repeat this mistake in the other Chinese villages. When he spoke of the harvests his collective farm was bringing in he played down the figures. The interesting part of this story is that after the war, when Losaza Mada returned home, he and his friends increased the poppy harvest eight times above what it used to be before the war.

The medicinal poppy or the *chin-hua* (golden flower) as it is called by the Dungan in the Issyk-Kul Valley, is a valuable plant. The collective farmers sell the juice to the state. All over the world it is known as the opium poppy for the "black smoke" that has brought such great suffering to China and some other countries is made from its juice. In the Soviet Union it is called the medicinal poppy, because the only demand for opium is by chemists, who use it in many medicines. Besides, in the Issyk-Kul Valley the poppy itself is now different. It is a new Tien Shan early-ripening variety that has been bred by Soviet selectionists at the zonal experimental station of medicinal plants in Przhevalsk.

The experimental field of this scientific station resembles a huge flower-bed, for in it you will find the world's biggest collection of

medicinal poppies—nearly a thousand varieties. It seems as though a Chinese painter skilled in the uses of bright and pure colours had run his brush over this field, for there are white, pale-blue, yellow, pink, dark-blue, orange, and red-spotted white poppies. Green heads ending in tiny crowns peep through this sea of colour. The seeds of the medicinal poppy are white but the taste is the same as of the ordinary black seeds.

We must say at once that contrary to a widespread belief, the medicinal juice is not pressed out of the seeds. It forms not in the seeds but in the walls of the heads. Every day in the course of the harvest, the collective farmers make incisions on the walls of the heads after midday when the plants have been warmed by the sun. A milky juice oozes out of the incisions, hardens in the shape of amber drops and turns brown by nightfall. At night, before sunrise, these hardened drops are collected into a cup suspended from the belt of the picker. This is raw opium.

At the Issyk-Kul collective farms, the cultivation of poppies is mechanized; tractors, special seeders, fertilizing machines and cultivators work on the plantations. The only process that has not yet been mechanized is the collection of the juice. This is done by hand. But the ancient implements for this—the *henjia tosa* (incising knife) and the *hu jen tosa* (scythe-shaped knife for collecting opium)—have been thrown into the junk heap. The collective farmers now make the incisions—three simultaneous incisions on each poppy head—with an instrument that resembles a small plane with three blades. It was designed here, on the shores of Issyk-Kul. The blade for collecting the juice is likewise a recent innovation. With one stroke of this blade, the picker scrapes every bit of the hardened juice off the head.

A large quantity of the medicinal poppies grown in the U.S.S.R. comes from the region around Przhevalsk. This plant was first brought to the Issyk-Kul Valley from China by the Dungan and prior to the Revolution they were the only people who cultivated it in that area. Today there are poppy plantations at many of the Issyk-Kul collective farms. The medicinal poppy has ceased to be a purely Dungan plant.

Moreover, the Dyishin Collective Farm is now a multi-national enterprise: it has merged with neighbouring Russian and Kirghiz farms. The farm bears its Chinese name as before but now people of

eleven nationalities—Dungan, Kirghizes, Russians, Ukrainians, Letts, Byelorussians, Uigurs, Uzbeks, Kazakhs, Kalmyks and Tatars—work side by side in the poppy plantations. Friendship, spoken different in different languages—*druzhba* in Russian, *dostuk* in Kirghiz, *yui* in Chinese—is what has united these people into a close-knit family and brought them what in Chinese is called *sinfu*, in Kirghiz *bakist* and in Russian *shchastye* (happiness).

5. IN THE RAVINES AROUND ISSYK-KUL

In our age poetry and science are holding their arms out to each other. An increasing number of writers are drawing their inspiration from the creative endeavours of science, and in their papers and essays more and more scientists are writing words that have the force of poetry. The wealth of scientific language, finding its artistic expression, is entering ever deeper into the life of the people

Kirghizia is the home of Professor I. V. Vykhodtsev, a botanist well known for his books on the natural and artificial meadows in the Tien Shans. But now, as we journey around Issyk-Kul, occasionally driving up to the foothills of the mountains surrounding the lake and from there looking up and wondering at the transparency of the air, thanks to which—look!—every blade of grass, every flower can be clearly distinguished a long way off on the mountain slopes, we find ourselves thinking of quite a different work by this scientist: a paper entitled “Geobotanical Landscapes of Kirghizia.” This paper is poetry itself. It has only been printed in the *Proceedings of the Kirghiz Branch of the U.S.S.R. Academy of Sciences*, which has a small circulation and has therefore not reached the general reading public. For that reason I shall take the liberty of quoting a big passage from it:

“Spring marches in triumphant procession across the mountains of Kirghizia. The peaches and apricots have already shed their blossoms, and now it is the apples, pears, plums and cherries that are in bloom. A wave of tulips gives way to fields of scarlet poppies, and roemeria, cornflower-blue ixylirion and golden Arabian primroses weave their patterns on them, and the pale-pink eremurus form a veil

on the foothills. The valleys grow hotter. The redolent white robinia and the silvery oleaster fill the air with their aroma and close the season of blossoms in the orchards of this lovely, sun-suffused Soviet land.

"Summer enters into its own, and sultry weather sets in. Above the valleys, on the green pedestal of foothills stand the crests and peaks of the mountains still wearing their sparkling winter finery. The life-breath of spring has not yet reached them. But spring advances perseveringly into the mountains as well. In the belt of low mountains, florescence is at its height in May and June. There everything blooms gaily, rapturously. The air is full of the fragrance of flowers. And what colours! And the mosaic of leaves and flowers: rose bushes, some with big and others with small golden-yellow, cream, white, pale-pink or pink blossoms; honeysuckles spangled with yellow, lilac or white flowers; the giant, pale-pink racemes of the magnificent eremurus; smartweed with drooping bunches of white, sweet-smelling flowers; beds of lilac-blue vetch, golden everlasting peas, dark lilac origanum, pink ragwort, woundwort and other lovely flowering plants make a wonderful, unrivalled carpet on the slopes of the mountains...

"Yes, springtime in the Tien Shans is really a sight to see. There is magic in the azure sky and on the emerald earth.

"Time goes by, summer comes and spring goes higher and higher up the mountains, reaching the subalpine belt where the meadows turn into gorgeous, lush, green carpets into which are woven white anemones, purple shemyurs, blue forget-me-nots, orange and golden poppies, flaming fleabane, lilac asters, deep purple geraniums and other Tien Shan flowers. Here and there the slopes are purple with countless shemyurs or lilac with geraniums, and the hollows seem to have been painted with orange globe-flowers and blue forget-me-nots. All this splendour make the mountain-sides look as though they were studded with amethysts, rubies, topazes, drops of scarlet blood and gold. The dark-green malachite spots made by the creeping junipers complete the exquisite picture of the Kirghiz subalpine meadow.

"Here you are in the Alps at last! It is cool. The snow and the glaciers are only a stone's throw away. The thunder of the swift, formidable mountain rivers has been left far below. Streams, murmuring

like children in a garden, carry on their conversation. Stillness is all around you. You walk on the low-growing grass in what at first seems a monotonous alpine meadow, but if you look closely you will see in the grass myriads of blue, white, pale-blue, golden, purple, pink, scarlet and red stars, heads and so forth. These are autumn gentians, buttercups, primroses, loco-weeds, astragalus and innumerable other small but graceful flowers growing in direct proximity to the glaciers.

"Higher up, closer to the snow-fields and glaciers, amidst boulders and stone-strewn alpine stretches you find blue globe-flowers, yellow buttercups, richterias and 'hillocks' of dryases. The silence is absolute. You distinctly hear the beating of your heart."

These lines about the march of spring in the Tien Shans may be applied *in toto* to the mountain ranges encircling the "Kirghiz Sea," particularly to the Terskei Alatau, to its northern slopes that face the lake.

The Kungei Alatau, whose sheer southern sides reach down to the shores of Issyk-Kul, is wilder and more rugged. On its sun-scorched, wind-dried slopes the grasses hide in shady ravines and bloom as gaily and rapturously as elsewhere. But here the eye is caught more frequently by naked, cracked porous boulders and by the rock debris at the base of the cliffs, which would have seemed lifeless had it not been for a lizard darting among the stones or a small flock of mountain partridges, as grey as the stones, suddenly taking to wing from underfoot.

In the Terskei Alatau and the Kungei Alatau there is a colour which the traveller finds particularly fascinating. It is the verdure of the Tien Shans spruce forests, which look inky-black deep in the ravines. As you go into a ravine along the banks of a noisy little river, you will find the tall spruce-trees first standing in rows, clusters and curtains choosing the shady spots, and farther on in the coolness of the ravine, forming a dense forest.

The Tien Shan spruce is one of the straightest and most graceful of trees. Its luxuriant crown reaches down to the very ground, hiding the trunk. This tree grows to a height of sixty metres. In the Tien Shan ravines it forms primeval forests, with pale plaits of moss hanging from the branches over the moist ground. Spruce cones lie in the cool semi-darkness amidst ferns and brown, rotting needles,

and dirty-white agaric push their way out of the ground. The whistle of a thrush comes from the thickets. The smell of resin, decay and mould makes you feel giddy.

Brightly coloured butterflies flutter from flower to flower in the glades with their thick overgrowth of currant bushes, raspberry-canes and waist-high grass. The air is filled with the buzzing of bees and bumble-bees. In such a glade you will find the Issyk-Kul monk's-hood against which every traveller in Kirghizia is warned.

This herb can be easily recognized by its dark-blue, almost purple flower. Its root contains aconite, which is one of the deadliest poisons on earth. It is sufficient to hold the root in a hand wet with sweat to be poisoned. If even a tiny piece of the root lies in a skull-cap and somebody puts this skull-cap on after throwing away this piece, he may be poisoned, sometimes fatally, if his head perspires. Soviet doctors use this poison in microscopic doses in certain medicines.

There are in the world two hundred thousand families of plants, but man has found a medicinal use for only a few hundred of them. We shall most certainly learn of many new discoveries and many new medicinal properties when doctors have studied all the plants known to man. Quite recently new, hitherto unknown lactones have been discovered in the root of the saryndyz: tincture of saryndyz is a curative against ulcers of the stomach and the duodenum. There must be medicinal properties in numerous other grasses and roots.

In the foothills of the mountains of Kirghizia, gatherers of medicinal plants seek the minbach (Tien Shan birdweed) from which novocain is made; the valerian root, which vies with the best Turingian varieties; the ephedra, from which is extracted ephedrine, a substitute for adrenaline; the ferula, whose resin is famous as a potent remedy for rheumatism; the thermopsis, a poisonous leguminous plant which yields thermopsis alkaloid, a substitute for cetisine and laveline that are of great importance in military surgery; the *ayv-chach* ("bear's hair"), a splendid itch remedy for animals; and the gland, sage, rhubarb and many other medicinal grasses and roots.

In autumn children gather huge quantities of barberries in the spruce forests around Issyk-Kul. Excellent wine is made from these berries at the distillery in Przhevalsk. In summer you will most certainly meet a collective-farm bee-keeper in these forests. His fire

crackles merrily on a hill near his hives, and the wind catches up the manes of brown smoke and carries them far into the ravine. The Issyk-Kul Valley is famous as a bee country. the mountain flowers yield colossal quantities of nectar In the Terskei Alatau forests there are numerous swarms of bees that have escaped from an apiary and turned wild.

A new variety of bees, guests from distant Svanetia, were flown to the Issyk-Kul village of Ken-su in 1955. The queen-bees were each brought in a tiny container no bigger than a match-box. These Caucasian mountain bees are more industrious than the local varieties and collect more honey, and in a few years they will be settled in all the apiaries of the Issyk-Kul collective farms.

Stopping before a glade, the hunter roaming about the Issyk-Kul spruce forests with a gun in his hand sometimes sees the silhouette of a roe-deer, with small branching antlers and proudly uplifted head. Large doves coo in the tops of the trees. A woodpecker pecks busily at the trunk of a tree, and the ochre-yellow fur of the Tien Shan fox shows for a fleeting instant in the grass.

In the forests there are black grouse, hares, ermines, weasels, wild boars and badgers. The lynx rules these forests and the hunter's pride is of course well gratified when with an exaggeratedly careless gesture he throws on the floor the spotted skin of this beast of prey. I have tasted lynx flesh and found it very palatable and without any specific smell. In fact it may very well be mistaken for veal. And therefore instead of leaving it for foxes and owls to feast upon I would advise the hunter to bring it home together with the skin.

After a long walk in the forests the traveller will stretch luxuriously in the shade of a huge spruce by the side of a stream hurtling through a ravine, look at a small waterfall to which a rowan-tree has stretched out a rust-coloured bunch of berries and watch the water frothing and boiling and carrying along with it greenish-gray and blue stones. He will see woodcocks running across the pebbles on the opposite bank, effortlessly turning the stones over with their hooked beaks and drawing out worms and larvae, and there are bound to be fish swimming swiftly against the current up the waterfall, flashing their tails in the glassy mass of falling water and disappear-

ing over the top. The Tien Shan spruce forests are a paradise for the naturalist.

Hiding in the riverside overgrowths of sweetbrier that form dense rosariums, the traveller will sometimes see a maral deer emerge from a thicket and cautiously approach the river; in Kirghizia it is forbidden to hunt this deer. If the traveller is lucky he will see a mountain duck followed by its offspring swimming with the current of a roaring river from the nest to the lake. Tossed by the angry waters, the ducklings look like bits of fluff and though they are sometimes flung against stones their thick, resilient down effectively protects them against injury.

To finish our brief story about the birds and animals of the Issyk-Kul ravines we must mention the fact that a drive has been launched against hawks. The real hunter had never stinted a bullet for these birds of prey, which destroy many useful birds and animals, but the struggle against hawks has acquired a new importance in the Issyk-Kul basin where the scientists and collective farmers have started enriching the animal kingdom of their lovely valley.

Musk-rats have been settled in the mouths of the rivers. They have multiplied quickly and built their "huts" along the shores of Issyk-Kul. The Ussuri raccoon, which is famous for its black-brown fur, now lives around the blue Issyk-Kul, spreading and rising up the rivers to the spruce forests. The *kolonok*, a Siberian animal of the marten family, has been given a new home in the Jety-Oguz forests, and it has spread to the forests of the neighbouring ravines as well. Another newcomer is the blue squirrel from the distant pine woods of the Altai Mountains.

Late in the autumn of 1951, two hundred of these squirrels were brought to the Jilandy Ravine, which is located near the Przhevalsk base of the Kirghiz Forest Experimental Centre. When these northerners were released from their cages they at once darted up the trees. The animal-breeders at first fed the squirrels by leaving sunflower seeds and pieces of bread in the forests. The animals had to be given an opportunity of getting used to a new diet: in their native forests they fed on pine cones but here they had to grow accustomed to spruce cones. It did not take them long to get to like this diet. Everything seemed to run smoothly. The only thing that worried the

animal-breeders was that the squirrel encountered an enemy. on the second day after they had been brought to their new home, one of them was whisked away by a goshawk right before the eyes of the animal-breeders. It was then that a call was sent to all hunters to destroy hawks and thus help convert the Tien Shan Mountains into a realm of squirrels.

In some of the Issyk-Kul ravines, if you go there in summer, you will meet people who follow the difficult but interesting trade of timber rafter

Early in the morning you will see a small stream flowing swiftly between water-washed boulders and stones in a spruce forest. As the sun climbs higher the snow around the glaciers melts faster and the level of the stream rises perceptibly. The water turns from grey-blue to almost black. New streams and tens of new brooks appear beside the main channel. They too swell out, roll across the stones and merge into a single formidable torrent. The roar grows increasingly louder. Masses of water which have by now turned red, move the stones on the bed of the channel. This is when the rafters push the spruce logs, that had been prepared beforehand, into the river.

Mighty trunks from which the branches have been lopped off spin and turn between the rocks, climb on each other, sometimes rearing up only to fall back again and race with the current. The logs heaved out onto the bank by the current are pushed back into the foaming water. In this way they are carried downstream until nightfall, when the glaciers stop melting; the rivers grow shallow again and thousands of logs "hang" on the boulders, waiting for the next day, for the sun and water.

At the height of the float the river channel is sometimes jammed by a huge number of logs. This is always fraught with the danger that as the river swells it might tear out of its channel and shoot sideways, destroying and washing away everything in its path. The most experienced of the rafters are therefore stationed at the danger spots. With hooks these men attack the mass of logs, pulling them apart and loosening the jam.

All the timber felled in Kirghizia was until recently floated down rivers, but today only some of these rivers are used for this purpose. Motor roads have been built in many of the Issyk-Kul ravines and

mobile power stations and electric saws have appeared in the felling camps, where timber-hoisting cranes, mounted on cars, load the logs onto trucks. Columns of trucks and road teams have come to the Tien Shans to replace the rafters, and the rumble of the drag-winch hauling timber to the lake is now a familiar sound in the ravines.

The Tien Shan spruce forests are the only local source of timber in Central Asia. That is why, in spite of the harsh natural conditions, several timber enterprises have been built around Issyk-Kul. The republic's colossal building schemes require great quantities of timber, and the spruce is being felled in huge numbers. If this pace is kept up it certainly will not be long before all the forests are cut down. As it is, the Tien Shan spruce is living "in critical climatic conditions."

There was a time at some prehistoric age when the climate in the Tien Shans was cool and damp and spruce forests covered all the mountains. Gradually the climate changed and in the face of the sun's onslaught the forests withdrew to the ravines, to the shelter of the shade. But even in the ravines there are slopes where once cut the spruce will not grow again because of the abundance of sunlight and the dry winds. In such places a band has been imposed on felling. Anybody can see how important it is to revive the Tien Shan forests in conditions such as these.

That is exactly what the scientists of the Przhevalsk base of the Kirghiz Forest Station are planning to do. This scientific institution's big log building with its shingle roof and open verandah stands surrounded by apple- and plum-trees in the Jilandy Ravine two thousand one hundred metres above sea level. In this ravine people are thinking of the future of all the ravines around Issyk-Kul. And not only of the ravines!

Go to the tree nursery at the Przhevalsk base. In addition to young spruce-trees, you will see the larch, the staghorn sumach, the walnut-tree and, most important of all, the Crimean and the Siberian pine. It has been found that pines adapt themselves to the climate of Kirghizia better than the Tien Shan spruce: the Crimean pine roots where the spruce cannot grow. At the Przhevalsk base, there is today a



A. Usenbayev, People's Artiste of Kirghizia, appears on Frunze television

Electronic signalling apparatus made at the Physical Instruments Works in Frunze





Vineyards of the Kirghizia Collective Farm

Inter-collective-farm hydropower station on the Karabalty River



young thicket of Siberian pines covering an area of ninety hectares. Soon small pine groves and then bluish pine woods filled with the aroma of resin will begin to spread out to all the Tien Shan ranges.

6. HOLIDAY LAKE

An invigorating coolness comes down the foothills. The winding road takes you to the village of Essenomanovka in a valley where the small Jety-Oguz River, white and frothing, leaps from rock to rock. The growing roar now merges with the hum of the motor, now, where the road retreats, goes out of hearing. Here and there dust-covered shrubs cling to the naked walls of the ravine. Before long you see huge, red sandstone boulders pressing the road to the brink of the river. The red of the boulders is of a brilliant hue and you get the impression that a giant had passed by with a brush and painted the rocks crimson as a practical joke. Folk fantasy compares these boulders with red bulls, hence the name for the ravine: Jety-Oguz (Seven Bulls).

No sooner do you pass these boulders than before you opens a palette of unusually clear-toned, rich colours. A green, frothy, rock-filled stream flows past the buildings of the Jety-Oguz Health Centre. Tien Shan spruces grow on the slopes surrounding the health centre, and on the level ground there are yellow, lichen-coloured rocks between which are glades with shrubs growing in them. Here you find white and yellow sweetbrier blossoms, pink honeysuckle, hawthorn bushes, raspberry-canes and barberry shrubs; in the fields—irises, forest orchids and the thick clubs of pale-pink eremurus; higher up, in the glades between the juniper groves—flaming hound's-tongue and cold, white edelweiss; and still higher, against the background of snow-white mountains—the bright feathers of the birds in flight. No palette can rival the colours of this highland oasis.

Before you shake the road dust off your feet, a purple-blue haze begins to envelope the valley like a huge cloak. Darkness gathers rapidly. And although you are tired after your long drive, yet with sleepy eyes you note that here the starry heavens seem to be extraordinarily high, much higher than elsewhere. Lulled by the gurgling of

a swift mountain river, you sleep soundly. You wake up rested in every cell of your body. And as you open your window the pane mirrors the mountain landscape, and the fragrance of spruce needles invades your room. You look out of the window and you see griffons in the sky. And the mountains rising in the distance are flooded with a light that resembles a luminous mist or a cloud, and their peaks seem to be on fire, with smoke rising from them. Thus begins the first day of the vacationist who has come to spend his holiday in Jety-Oguz from Frunze, Tashkent or even the Urals.

Nowhere else in the world is there a health resort with such strongly radio-active waters so high up in the mountains (two thousand two hundred metres above sea level). An interesting fact is that as you approach the springs or the griffons of Jety-Oguz, as the local doctors call them, you will hear their "pulse," the rhythmical throb of the water as it rises from the depths of the earth. Geologists believe that these springs are at least two or three kilometres deep. Doctors maintain that for their medicinal properties these waters can vie with the world-famous Tskhaltubo springs in Georgia.

There are more mineral springs in the Tien Shans than anybody can count. The Buddhist inscriptions engraved on a boulder in the Issyg-Ata Ravine tell us that as long ago as in the seventh century people sought cures in the hot springs fountaining near this boulder. To show their gratitude for their recovery, people from the villages in the neighbourhood used only recently to smear sheep grease on the image of Buddha engraved on the boulder—that when there already was the health resort of Issyg-Ata ("Father-Heat"), which now attracts vacationists from all over Central Asia. The Khazret-Ayuba springs have been known in even greater antiquity: around these springs there is now the Jalal-Abad health resort, which is one of the most modern spas in Central Asia. A multitude of other medicinal springs dotting the Tien Shans are waiting to be put to use.

One winter as I was crossing the Alai Mountains in a truck, the driver suddenly stopped the machine and ran to a steaming pool surrounded by snow and ice. He quickly undressed, jumped in, and with the water up to his neck stood in it with bliss written all over his face. Then he climbed out, hopped about on the snow, dressed and was back behind the wheel of the truck. He told me that summer and

winter alike he bathes in this pool every time he passes it, adding jokingly, yet with conviction, that this keeps him healthy

It was probably this search for health that prior to the Revolution attracted the peasants of the Issyk-Kul Hollow to the Aksu alkaline hot springs. These springs are situated near the village of Teploklyuchinsky, in one of the ravines of the Terskei Alatau. The peasants were followed by doctors and the Aksu health resort sprang up. It is now famous as a collective-farm spa.

As recently as 1955, the Budyonny Collective Farm, which is located on the southern shore of Issyk-Kul, built a small health resort for its members near the mineral springs on its own land in the Chon-Kyzylsu Ravine. In the Terskei Alatau alone, mineral springs have been investigated and found to have medicinal properties at Altyn-Arasan, Kokomeran, Tursu, Keregeh-Tash, Kaji, Bozshchuk, Ulakhol and Jukuchak. All of these places are sure to be converted into spas some day.

There are health resorts on Issyk-Kul as well. The best known of these is Koisara, situated fifteen kilometres away from Przhevalsk, on the southern shore. It is known for its koumiss and its healthy mountain climate.

A beautiful panorama unfolds before you as you approach Koisara on a ship. Boats come out to meet you, leaving long wakes on the water. The blue lake is bounded by beaches of golden sand with the suits of the bathers adding splashes of vivid colour. The green meadows and fields extending for several kilometres beyond the beaches look as though they are only a narrow bright strip of land emphasizing the ravine-pitted mountain sides of the snow-capped mountains. On the very shore of the lake there are a newly-planted but already luxuriant park covering thirty hectares of land, and the handsome white buildings of the health centre. People suffering from nervous disorders recover their health at Koisara.

A giant physiotherapeutic health centre created by nature, as it were, specially to combat the ailments of man, the Issyk-Kul Hollow and the area around it, like the whole of Kirghizia, were not so much a sanctum of health as a cemetery only forty odd years ago. Epidemics of smallpox, cholera, plague and typhoid fever used to break out from time to time and spread over all the Tien Shan ranges,

reaching even the natural quarantines, the valleys, the road to which lay through snow-bound passes. Skin diseases, trachoma and malaria were widespread in Kirghizia.

Here is what one of the administrators of Przhevalsk wrote in a memorandum in those days: "The Kirghizes do not require medical assistance. They are managing quite well with the help of witch-doctors and *tabibs*. And if anyone of them falls ill it is because of ignorance or through malicious intent" But why speak of administrators, when the only doctor practising in Przhevalsk at that time wrote that "the Kirghizes have no need for medical attention because their nomad way of life saves them from dirt, and if through carelessness they do fall ill they have witch-doctors skilled in Kirghiz medicine to look after them."

There is hardly a person of the older generation in Kirghizia today who does not remember a witch-doctor mumbling incantations to the accompaniment of the *komuz* and dancing with a knife in his hands to scare away the evil jinns and compel them to leave the body of a sick person. I take it for granted that you, dear reader, have never witnessed the jugglings of a witch-doctor and I therefore feel that if you are not given an idea of the role witchcraft played in the old days you will regard a Kirghiz hospital, polyclinic or health centre as an ordinary medical establishment and thus miss the chief point. And so, while spending some time with you on the shores of Issyk-Kul, I shall tell you something about this past. I shall begin with an episode I personally witnessed when I was in Kirghizia in 1929

Horse dung was burning in the fire. A little girl of three was dragging a cat around us on the end of a string. The cat had resigned itself to its role of a doll and fell fast asleep each time the rope round its neck was loosened. In silence we kept glancing at a pot hanging over the fire on a tripod. We were a "vitamin team."

In some mountain regions of Kirghizia the nomads had never seen fruit or vegetables. Their diet consisted of meat, milk and a small quantity of flour and salt. That was the cause of some of the diseases. To put an end to this state of affairs, "vitamin teams" (a propagan-

dist, a cook and a vegetable-grower) were sent to the mountains in the summer of 1929. The business of our cook, Alexander Ivanovich, was to prepare vegetable dishes for the local people. These dishes had to be so good as to evoke a desire on the part of the Kirghizes to cook them themselves. I was the propagandist and it was my job to advertise vitamins. The third man of our team was Kostya, a farming instructor. He carried about with him little bags of vegetable seeds suitable for the mountain soil and taught the Kirghizes to grow cucumbers, cabbage, radish and carrots.

But Kostya was not with us on the morning I am talking about. He had gone off for a doctor at daybreak. Urlakan, a member of the Komsomol, had fallen ill and was lying on a tattered cotton blanket in a corner of the yurt. He had been delirious all night, regained consciousness towards sunrise and called his mother, but when he saw the rings round her tired eyes, he had said nothing and turned away. Then he had lost consciousness again.

We were waiting for the doctor and the witch-doctor. The medical caravan was somewhere in the Jungala Valley about a hundred kilometres away and we knew we could not expect the doctor earlier than by evening. The witch-doctor, in spite of our remonstrances, had been invited by the sick lad's parents. He was a well-known *bakshy* (medicine-man) and bore the unusually long-winded name of Kulmambet Ashymbai Yesenjan Tureh-geldy Khojayev. He lived just beyond the mountain ridge and we soon heard the beat of his horse's hoofs.

The Kirghizes who went out to meet him crowded in front of the yurt. The *bakshy*, an elderly man with antimony-painted eyes and a face marked by the "yellow flower" (smallpox), jumped down from his horse, leisurely took from a striped saddle-bag a bunch of little bells, a *kanjar* (straight knife) with coloured pieces of cloth tied round the handle, a hat with bells on it, and many other instruments of his craft. Kicking the cat out of the way, he bent forward and crossed the threshold into the yurt.

Urlakan's condition was getting to be really serious. His breathing was laboured and he kept clutching at his chest. Fever was burning him up and sweat was pouring off him like water from a towel that

is being wrung. The *bakshy* went up to the boy and felt his pulse. Then with two fingers he pulled the lad's white, parched tongue.

"Bad," he said in Kirghiz, shaking his head and picking up his *komuz*.

He rubbed spruce resin on the sheep-gut strings and then ran his fingers across them. It seemed as though a whole swarm of wasps were droning softly. Urlakan's old mother wept behind a curtain in the yurta.

Cunning buzzing sounds were carried along the felt walls of the yurta. They rose higher and higher and then suddenly broke off on a half-note. The garbled melody created an atmosphere of suspense that communicated itself even to us, outsiders, so much so that we felt a kind of chill running down our spines. The relatives of the sick boy sprinkled the walls of the yurta with cow's milk. They threw a tuft of *adyrashman* into the fire, from which we had removed our tripod and pot, and the stupefying smell of this grass filled the yurta. Then, at a sign from the medicine-man, they tied a horse to one side of the yurta and a ram to the other and brought the ends of the ropes into the dwelling. This completed the preparations.

The *bakshy* again seized his *komuz* and, with one hand resting lightly on the finger board, played a weird melody. Interlacing, the low notes of the strings spread, as it were, about the earthen floor. Sometimes a sudden high note seemed to soar to the ceiling only to fall back again into the dense net of bass strings. Clear and vibrating, the voice of the medicine-man rose above the murmurs of the *komuz*. Hardly audible at first, it grew louder until it drowned the *komuz*. The music moved into the background. With a light sibilance, the *bakshy* sang a song in which he denounced the evil jinn Kulenger, who was sitting in the body of the sick boy.

*Kulenger, Kulenger, O you lanky Kulenger,
Your yurta into pieces I shall tear, charging like a fearless warrior.
Begone, begone, you jinn, before the breath of Suleiman!*

The medicine-man moved his head, and the feathers in his cap swayed. The bells jingled.

*O insect with a camel's head,
I'll force you out, don't joke with me!
Now, stop tormenting the poor invalid.*

The behavior of the *bakshy* told the superstitious nomads what was happening: jinns, their eyes bulging with fright, were entrenched in Urlakan's stomach. That was good! But there was more to come

*If I get cross I'll let out snow and frost to bite you,
Encircle you with gorse and goosefoot.
I'll hedge you in with brambles, whip you with mint!
Begone, jinn, begone, before the breath of Suleiman!*

"Beware!" a yell that was almost inhuman rent the air.

Hearts contracted, mouths went dry. The *bakshy* struck a skin drum hung with amulets and leapt to his feet.

The jinn Ergoben was in the yurt!

The *bakshy* seized a whip and began to flog the invisible Ergoben. The sharp tip of the whip snaked in the air, filling the yurt with cracks.

This was too much for Ergoben! The pain was more than he could endure. He fled through the smoke-hole. But the jinn Kozbernabet was flying to his rescue, in a blue carriage, which raced through the air at a height of five spears. Beware! The formidable jingle of bells rushed at him. He looked into the yurt. A sword was tracing a circle over the fire-place. The blade gleamed in the light of the fire. It was evident that he would not get the better of the medicine-man. "This *bakshy* is too skilful for me," he said to himself. "I had better turn back."

The relatives of the sick lad, pale with fear, listened attentively, guessing what was happening by the invocations and shouts of the witch-doctor. Sick with fright, the jinns in Urlakan's-stomach were peeping over his liver. That was good! But there was more in store for them!

The *bakshy* took his *kanjar*, tightly gripping the handle. The rags on it fluttered. The bells jingled. Slowly bending forward, the *bakshy* aimed the knife at the Komsomol's belly. There was a deathly silence

in the yurta. The onlookers held their breath. The silence was broken by the medicine-man, who said in a toneless voice.

"O, fly-mouthed snake from the frame of the yurta, pull!..."

A low whistle drowned the rest of the sentence. The medicine-man pricked Urlakan's exposed belly with the *kanjar*.

"Ai, the jinns have run to the head!"

"O, grey snake of the thickness of the threshold, pull!..." He pricked Urlakan's pale temple. "Ai, the jinns are back in the stomach! They won't go away—Urlakan will die, I am telling you!"

With the *kanjar*, the *bakshy* began to prick the Komsomol in the belly, chest, feet, head and arms. This meant the jinns were rushing back and forth in Urlakan's body. The hand wielding the knife danced madly, touching the body of the sick boy. A whistle came from the witch-doctor's lips, which had turned blue from the tension, growing louder and louder, and the sweating onlookers had the feeling they were under a cold shower. Urlakan groaned and twisted.

"Away! Away!" the medicine-man spat into the boy's eyes. "Beware!"

Straightening his back with convulsive movements, the *bakshy* struck his skin drum and rushed to the square opening that served as a door, barricading it with his body. He waved his *kanjar*, then struck the drum again. This meant that the frightened jinns had darted out of Urlakan's body through his mouth. This meant that the jinns were rushing about the yurta, feverishly seeking for a means of escape.

But a *bakshy* as famous as this one could not afford to let them slip through his fingers. He could not allow the jinns to go on torturing poor folk!

"I, Kulmambet Ashymbai Yesenjan Tureh-geldy Khojayev, have been to the palace of Suleiman! I am a *bakshy* whose name the wind bears from Aksa to Issyk-Kul! Away! Begone! Look, one of the jinns is climbing the rope to the horse's mouth. He will not torment the sufferer any more! Away! Begone! Look, the second jinn is climbing the rope into the ram's mouth!"

He began to whirl like a top, beating out a tattoo on the drum. In this fashion he went round the yurta, bent down and suddenly—he

was also an acrobat!—no he did not leap, but seemed to fly out through the door.

For a full minute there was not a sound. Nobody dared so much as move a finger. Then the *bakshy* reappeared in the doorway and calmly walked in and collected his belongings. It was only then that we all felt how numb our backs had become, how our necks and knees ached. Urlakan's relatives got up, stretching their arms and legs and talking loudly all at once, marvelling at the skill of the medicine-man. They trooped out of the yurta and crowded round his horse.

The witch-doctor hastelessly untethered the horse and ram that had been tied to the yurta and led them to his mount. The people made a wide passage for the "unclean" animals, inside whom—everybody knew it—the jinns were hiding.

"I shall take the jinns to the palace of Suleiman," the *bakshy* said, indicating the animals with a nod, "where they will be put in irons."

Urlakan's father bowed to the medicine-man. The mother stood in the doorway of the yurta, wiping her eyes with her sleeve. The *bakshy* rode away, driving the "unclean" animals before him. Following him with his eyes, Alexander Ivanovich, our cook, winked at me:

"D'you know where Suleiman's palace is? In the market at At-bashi."

"Disease afflicts those who groan." Even here, deep in the Tien Shan Mountains, folk wisdom has long come to appreciate that how a person feels or, speaking in modern terms, the state of the nervous system plays an important role in the rise and development of disease. Although the people hazily guessed at a few things, the activity of the witch-doctors, men skilled in pulling wool over people's eyes, was a real scourge and a curse in the Tien Shans.

The illiterate shepherds, intimidated into absolute submission by the *manaps* and *bais*, were suspicious of some of the undertakings of the "Russians" after the Revolution. But medicine won their confidence right from the beginning. When a first-aid team would pitch its tent in even the most remote village, it would be quickly surrounded

by men and women, and the doctors would sometimes find themselves compelled to give perfectly healthy people some coloured water in the guise of medicine, so that they would not feel offended and would go away satisfied.

Urlakan's parents were, of course, happy to see the doctor, who arrived post-haste in the evening of the same day. They were, in fact, as happy to see him as had been the case with the medicine-man. This comparison has a strange ring today and is not very respectful with regard to doctors, but in those years it showed how brilliantly medicine triumphed over darkness. The new is always obstructed by the old way of life. In Kirghizia people used to say: "No matter how bitter is the thing you are used to, if it is taken away from you it will seem to be sweeter than apples, sweeter than honey, sweeter than fragrant tea with sugar, sweeter than dried apricots."

I do not know if Urlakan got well. That same evening our "vitamin team" moved further into the mountains, from one valley to another, and never returned to that village. But I can bear witness that Soviet doctors have uprooted disease throughout the length and breadth of Kirghizia.

In those days, living as they did among nomads, the bearers of culture, whether doctors or animal-breeders, willynilly followed a nomadic way of life themselves. Besides, the number of doctors in the republic was pitifully small. That was the reason these first-aid caravans were organized. Whenever a horseman caught up with one of the caravans constantly on the move in the mountains and asked for urgent assistance, a doctor and an assistant would immediately ride to the village concerned. They would be followed by the whole caravan, the horses with red crosses on saddle-bags filled with medicines.

The personnel of these caravans helped the nomads with advice, vaccinated them against smallpox, and gave them ointments against skin diseases. After visiting a caravan, the shepherds would each carry away a cake of soap and also leaflets in the Kirghiz language telling how to prevent disease. I remember one of these leaflets having a drawing of a pink-cheeked girl with a tooth-brush in her hand and with pearly white teeth. The mountain dwellers regarded this girl as a nymph from a fairy-tale. After consultation hours and having finished anti-epidemic inoculations, the doctor of the caravan,

accompanied by an animated crowd, usually made the rounds of the village in order to check on the results of the drive for cleanliness that was started in the republic.

In passing I should like to mention that the cleanest yurtas I saw in those years were on the shore of Issyk-Kul, close to the beach where you and I, dear reader, are bathing in the sun with other vacationists and, shielding our eyes against the glare, watching the waves roll up the shore and leave lace-patterned foam on the sand at our feet. The health resort of Koisara, then just built, was only a collection of yurtas in 1930. They stood right on the bush-overgrown sand. In each were four neatly made iron beds. Bottles of koumiss could be seen inside the yurtas. The daily ration of koumiss was handed out in the mornings. Alongside these yurtas there was a yurta that served as an office, a yurta for the head surgeon, and another yurta set aside as a reading-room.

How long ago that was! The yurtas have now been replaced by the tall buildings of a neurosomatic health centre with facilities for mud-baths (the silt deposits of the lake) and modern X-ray, physiotherapeutic, dental and other departments.

The medical caravans have also become things of the past. Prior to the Revolution, Kirghizia only had 16 doctors, but today their number exceeds two thousand. They have received their training in Moscow, Tashkent or at the Kirghiz Medical Institute in Frunze. The Tien Shans are today free of smallpox and doctors have eliminated the last hotbeds of trachoma in the mountains. Malaria and tuberculosis have begun to retreat in the face of the great offensive that has been started by medicine. In every district there are hospitals, outpatient clinics, maternity homes, feldscher and midwifery stations, and women's and children's consultation centres. Where roads are at all passable, in the area around Issyk-Kul, for example, there is a sanitary service, and regions deep in the Tien Shans that are as yet devoid of roads are reached by flying ambulances.

In Kirghizia the flying ambulance service is playing an extremely important role. Let me tell you of a trip I made recently, for it will give you an idea of the activities of the "flying" doctors in the Tien Shans. The object of this trip was to write a feature about Kirghiz flying ambulances.

I arrived at the Frunze airport at night. The aircraft I intended to fly in was scheduled to take off at dawn with a consignment of penicillin for one of the mountain regions. The stars were twinkling in the sky when the pilots, the doctor on duty and I gathered for a cup of tea in one of the rooms of the airport building. The doctor, an elderly Kirghiz, told us how he had evaded being vaccinated against smallpox when he was a child and how, considerably later, in the thirties, he had gone to study at a medical institute, where after seeing his first skeleton he had had nightmares for weeks. Then he launched out upon the problem of how people get acclimatized to high altitudes.

While we spoke a tragic event, the details of which we learnt later, took place in the mountains. A rural postman went to a tiny village nestling in the shelter of a mountain crest to deliver the last letter in his bag. He rode his bicycle sometimes pedalling, sometimes "leading it by the bridle," as people say in Kirghizia. He delivered the letter and turned homeward.

Before the mountaineer to whom the letter was addressed finished reading, he heard a rumble gathering in the mountains. Was it an avalanche? He dashed out into the street and although he did not see the avalanche, he could tell where it was by the stars above one of the mountain-sides. They had been dimmed by snow-dust. From the way his dog was behaving, the mountaineer realized that its keen sense of hearing had told it of some disaster. What could it have been? Perhaps the cry of the postman as a mass of stones and snow came crashing down on him. The mountaineer whistled to his dog and followed it.

The dog first led him to a bicycle wheel sticking out of the snow and then to the postman. The postman was conscious but he could not move because of the snow pinning his feet and neck. Stones had caused serious injuries on his head and chest. The mountaineer freed the postman and with the help of fellow-villagers carried him on a stretcher to the valley, to a village which had a first-aid station.

At the Frunze airport, a radiogram was received from the doctor of the first-aid station asking urgently for a surgeon and freshly-conserved blood for a transfusion. Five minutes after the receipt of

the radiogram, a light flying ambulance taxied up to the airport building and we, the surgeon and I, boarded it

Flying over the Tien Shans at night is an unforgettable experience. You fly over the cold, snowy mountains and suddenly enter a stream of warm air rising from a valley. You find the smell bitterish and you wonder why. Perhaps because the air is filled with the smell of worm-wood? Nests of electric lights can be seen all over the valley. A shepherd's campfire flows past beneath the aircraft's wings as a reddish, blinking dot. The blinding rays from automobile headlights moving and crossing like swords form a unique grid of fire now at one end of the valley, now at the other, as though luminous bees had come from hives in the stars and were hovering in a fanciful swarm. The dark mass of another mountain range looms somewhere quite near the aircraft. Snow gleams with a silvery light along its top. The aircraft follows the line of the valley, and suddenly we feel the fragrance of flowering upland meadows. In front of us are another valley and more villages.

Fifty minutes after the take-off, we found ourselves circling over our destination. There was no landing field in this small valley. The pilot, after manoeuvring his machine, made for a meadow that he knew was big enough for a landing. But he had never landed there at night. He released a flare and we saw a drove of horses grazing below us. This was obviously not where we were expected.

We had to keep circling. Soon we saw the headlights of a car leaving a village and speeding towards the meadow our pilot had chosen for a landing field. A few minutes later, in the bright ray of the car's headlights, we saw the silhouettes of people running about and shooing the horses away. Incidentally, this method of illuminating a landing field with the headlights of a car has become customary in the Tien Shans. Turning and releasing two more flares, we began to descend for the landing. Twenty minutes later an operation was in progress at the first-aid station, lasting for two and a half hours.

Some months after this I met the surgeon in Frunze and asked him about the postman. The operation had been successful and after a month's convalescence the postman was sent to Koisara to finish his course of treatment. That meant that he too had wandered about the beach where you and I are now basking and lazily cleaning sand out

of the shells thrown up by the waves. Perhaps he had also smiled condescendingly as he listened to the young people, carried away by their own singing, discordantly but with gusto bawling a popular song in the health centre's park. Perhaps he had also taken a boat out to the lake and watched the water changing colour: it is light-blue near the shore, green-blue farther away where it is deeper, and still farther it is mirror-black with only a thin transparent layer of green-blue over it.

The poet is attracted by the beauty of the lake, the doctor is more interested in the medicinal properties of the water in it. Doctors say that the water of Issyk-Kul has a high content of minerals and that it is good for people's health. Add to this the mild highland climate—the summers are not hot, the winters are not cold, and the difference between the day and night temperatures is not sharp. Then add the abundance of ultra-violet rays and the veritably inexhaustible supply of koumiss, and you will find that Issyk-Kul is one of the best health resorts in the Soviet Union.

Another health centre, the "Issyk-Kul," has been built on the southern shore of the lake. The famous Cholpon-Ata Children's Health Centre, which journalists usually call the Artek⁴ of Kirghizia, is on the northern shore.

The white-columned double-storied building of this children's health centre stands in the bay of Kun-Bulun (Sunny Bay) with mountains protecting it against winds on three sides. Around the building there are avenues of birch and poplar, flower-beds, and walks fringed with white stone from the rivers and sprinkled with yellow sand. One of these walks takes you to the Avenue of Fairy-Tales, another runs to the health centre's orchard. When the buglers sound the assembly, boats turn back to the shore, and young fishermen take in their lines. In a noisy crowd, the children run up the wooden and granite steps leading from the beach to the main building.

The notes of bugles and the beating of drums sometimes recede far into the Kungei Alatau, which rises as a huge stone wall at the back of Cholpon-Ata. With a mobile kitchen, tents, drawing books, butterfly

Artek is a nationally famous Young Pioneer summer camp in the Crimea, at the foot of beautiful mountains sloping down to the Black Sea.

nets and cameras, the Young Pioneers go on excursions to the mountain valleys and bring back a host of impressions: the romance of camping in the mountains, of sleeping in a tent, of learning to light a fire in seventeen different ways.

In summer, Issyk-Kul attracts large numbers of hikers. Their figures with haversacks on their backs have become a familiar sight to the people of the villages round the "celestial sea," as the local boatmen call the lake.

These boatmen like to take tourists to a spot several kilometres away from Koisara, stop the boat and point to heaps of yellow stones that can be seen through the limpid water. Here they tell a legend about a sunken city. These heaps of stones lying beneath the water, that is furrowed by boats and schools of fish, and girdled by staidly swaying reeds, do indeed take on a certain shape and system, especially if you look at them with the eyes of a romantic. In local folk tales, happiness and wealth always lie on the bed of seas and lakes—distant and out of reach. The people living around Issyk-Kul today link their dream of happiness with work in the fields and with holidays spent in one of the health centres on the lake.

7. CHOLPON-ATA

For a whole day, from sun-up to sundown, we rode from one pasture to another with Boris Lukin, senior zootechnician at Stud Farm 54, which is situated near Issyk-Kul. A broad picture of a mountain landscape unfolded before us. Below, at the foot of the mountains, drawing our gaze like a magnet, lay the blue expanse of Issyk-Kul in a rim of snowy mountain peaks. The highland pastures that we visited were full of stones and flowers. And throughout our journey we were accompanied by butterflies, all of which were for some reason white. It must have been just that kind of day.

Without dismounting, we forded swift streams. Our horses, belly-deep in foaming water, snorted, pricked up their ears and rolled their eyes. We reached the alpine meadows through a layer of clouds, and watched the mist weave a pattern behind us. When the four-year-olds grazing in the meadow caught sight of us they neighed nervously.

and, with tails uplifted, moved out of our way. A magnificent stallion, the favourite of the stables, stretched his moist lips to us for a lump of sugar. We were told that with his hoofs he had fought off a pack of wolves, saving a herd of mares.

"He's bursting with spirit," the drover told us.

The watering place made a delightful picture. It was a sparkling stream flowing in a channel it had cut for itself in the rock. Light steam rose from the water. We dismounted and sat down to rest in the shade of a boulder. A herd of two-year-old golden bay Donchaks came to the stream. They had not yet been broken in. The colts were in a playful mood and were snapping at each other with their teeth. Then they saw us. The whole herd stopped as though it had suddenly turned to stone. The colts squinted their hot, blue-tinted eyes at us. Their slender, sinewy forelegs trembled almost imperceptibly. Then, neighing, they shied and in a bunch fled in panic back to the mountain slope, which looked as though red, flaming torches were being carried swiftly across it. Turned back by the drover, the colts returned slowly and began to drink the water thirstily, twisting their ears and ready to fly at the first sign of danger. There was so much tension in them, so much inner fire and vigour that even a person as unfeeling as a log could not help but retain this picture in his mind as one of his most vivid memories.

As we passed the herds, Lukin pointed out the stud farm's best horses. It was plain that he could never get his fill of looking at the horses, and for my part I found it a pleasure just to watch him.

He was not, of course, another Tolubai Synchi, a legendary Kirghiz drover, who, it was said, had only to look at a hair from a horse's mane to tell its character, or to see the shape of a horse's head to form a judgement of its masters, and in whose hands restive colts, who refused to be broken in, became as gentle as lambs. It is said that one day Tolubai broke into tears as he listened to a *kiyak* (Kirghiz fiddle).

"Why are you weeping?" he was asked.

"I cannot help it," he replied. "The hair on the bow is from the tail of my favourite horse, which was stolen from me nine years ago. Now I know that my pet is dead."

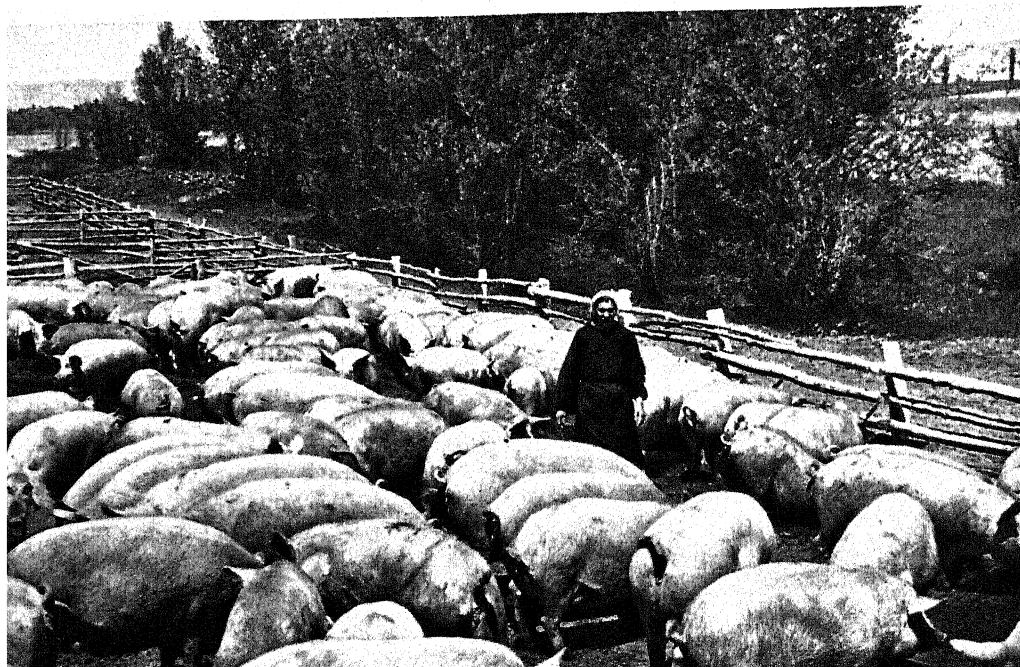
This fine hemp grows at the Jangi-Jer State Farm





Kara-Balta Sugar Refinery

Fattening camp of the Frunze Collective Farm



Naturally, Lukin could not boast of such knowledge. On his lips, the lips of a real expert, everything sounded much simpler, more commonplace, and yet it was much more varied than even what fantasy can conjure up.

In the evening we rode to the yurta of the drover Ady Bekmatov. It stood on the broad, slightly sloping top of a hill. At the bottom of the hill there was a lake which was already shrouded by the evening mist. It was losing the last of its colours and growing dimmer every minute. And the darker it grew the more clearly we were able to distinguish the white electric lights gradually coming on. A whole constellation of them blazed up right below us, in the village of Cholpon-Ata, which in Kirghiz means Father of Stars.

As we gazed at this lovely panorama, we heard a horse neighing softly behind us. We turned round and saw its outline in the darkness. The drover went up to it. He had saved it from a disease some two years before and had become attached to it. The horse, a mare, got into the habit of coming to the drover's yurta at this hour every day in order to have its mane and tail combed. Receiving this caress, it would turn back and rejoin the herd. We settled down for the night in the yurta. But all that night we heard the tinkle of bridles and our horses nibbling grass somewhere close to us. Complete silence descended as dawn began to break, when the horses fell asleep.

We woke up when the sun had not yet warmed the mountains. It was too early to drive the herd to water and so with Bekmatov, who is one of the leading drovers at Stud Farm 54, we discussed the ways pedigree horse-breeding was developing in Kirghizia.

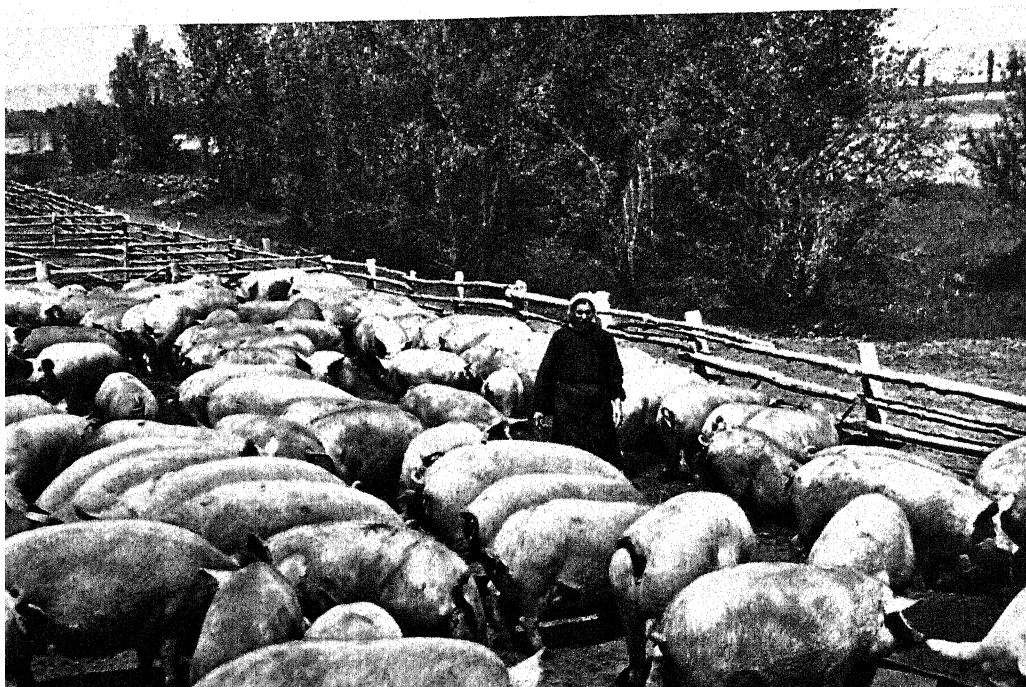
Folk fantasy used to embellish the sturdy Kirghiz mountain horse. Here is how legends describe it. "It has eyes as big as bowls. Its muscles ripple as the waves of a great mountain river. Its eyes are keener than a raven's. Its lips are like a ladle. A fist can be passed into its nostrils. Each hoof is as big as a campfire that had burnt out." There was every reason for the people to embellish their small horse. We have already mentioned the fact that prior to the Revolution the horse embodied the Kirghiz way of life. It was the breadwinner and the chief means of transport.

There is hardly a wayside stone in Kirghizia that has not had a horse tethered to it. When lovers parted they did not stand at the



Kara-Balta Sugar Refinery

Fattening camp of the Frunze Collective Farm



Naturally, Lukin could not boast of such knowledge. On his lips, the lips of a real expert, everything sounded much simpler, more commonplace, and yet it was much more varied than even what fantasy can conjure up.

In the evening we rode to the yurta of the drover Ady Bekmatov. It stood on the broad, slightly sloping top of a hill. At the bottom of the hill there was a lake which was already shrouded by the evening mist. It was losing the last of its colours and growing dimmer every minute. And the darker it grew the more clearly we were able to distinguish the white electric lights gradually coming on. A whole constellation of them blazed up right below us, in the village of Cholpon-Ata, which in Kirghiz means Father of Stars.

As we gazed at this lovely panorama, we heard a horse neighing softly behind us. We turned round and saw its outline in the darkness. The drover went up to it. He had saved it from a disease some two years before and had become attached to it. The horse, a mare, got into the habit of coming to the drover's yurta at this hour every day in order to have its mane and tail combed. Receiving this caress, it would turn back and rejoin the herd. We settled down for the night in the yurta. But all that night we heard the tinkle of bridles and our horses nibbling grass somewhere close to us. Complete silence descended as dawn began to break, when the horses fell asleep.

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wicket, but at the *mamy*, the post in front of a yurta to which horses were tied. When a Kirghiz returned home, he would enter his yurta with the saddle in his arms, the stirrups jingling.

Many old Kirghiz proverbs mention horses. Here are some of them: "A well-fed horse has eight legs," "The ass lifts its leg but it is the horse that is shod," "When a man's unlucky even his horses kick each other," "Only dogs rejoice at the death of a horse." Among these proverbs are some that sound as they were lines from a lyrical song telling of a mother's love. Take this one: "When the only son presses his legs to his horse's body on a long journey, the mother at home feels the stirrups with her feet."

The small Kirghiz horse has many merits. It has strong, sinewy legs. The hoofs are as hard as stone. It is capable of great endurance. It can cover a hundred kilometres along steep mountain trails without getting tired. On long and difficult marches it can stay without food for two or three days. Semyonov-Tienschansky, when he had to negotiate ledges, placed full trust in the Kirghiz horse's instinct, which is a surer guide than the human eye. The Kirghiz horse is remarkably tenacious. Mountain-climbers know of cases when it climbed back to a glacier after its hind feet had slipped into a crack in the ice.

But the Kirghiz horse runs a poor second when it is compared with horses of other breeds for height, speed and build. And so, after the Revolution, the Kirghizes assisted by science took special pains to make their darling bigger, stronger and faster. The centre of the work that is being done to improve the Kirghiz horse is precisely here, on the shores of Issyk-Kul.

Ady Bekmatov took us out of the yurta and pointed to a heap of stones looming a short distance away. "That is Alberton's grave," he said. I had heard about Alberton, and while rummaging in archives had even read a letter the local priest had sent the diocese about the funeral. The priest wrote that "the rites smacked of blasphemy, and Pyankovsky's grief for Alberton was unseemly."

All this happened before the Revolution. There was in Przhevalsk a Cossack officer named Pyankovsky, whose whole life was centred about horses. At one of the race meetings in Tashkent he saw the stallion Alberton and lost his heart to the horse. He decided he would have the stallion whatever the cost. He offered to buy the horse, but

the owner refused to sell it, saying it was part of his daughter's dowry. Pyankovsky changed his tactics. He asked for the girl's hand. But his suit was turned down. That did not discourage him. He abducted the girl and married her secretly. Then he "settled" his relations with his father-in-law, and finally got the "dowry." In 1907 he took his young wife and Alberton and went to live on Issyk-Kul where he started a stud farm. This farm was situated well to the east of Cholpon-Ata, in the Urükty Ravine, where the third department of the present stud farm is located. The sons and grandsons of Alberton, a remarkable stallion and the ancestor of the thoroughbred race horses of the Tien Shans, became famous throughout Semirechye.

After the Revolution, Pyankovsky handed his stud farm over to the state. This small farm was the foundation on which the huge Issyk-Kul State Stud Farm 54 was built up. If you look down from Bekmatov's yurta, you will see the new settlement of Cholpon-Ata as on the palm of your hand. It sprang up around the stud farm. The houses, resembling white beads, are surrounded by trees. The Cholpon-Ata Children's Health Centre can be seen somewhat to the left. And on the other side are the stables, the work-shops and the livestock farms.

The nomad Kirghizes were at first wary of crossing their horses with horses from the stud farm. When collectivization was started, the Issyk-Kul Stud Farm was given a task of great political importance. It had to make the thoroughbred horse a means of showing the illiterate nomads the advantages held out by well-organized animal-breeding.

In those days the banner of the Kirghiz *manaps* and *bais* was defended by Kok-Ala, a grey-skewbald Kirghiz horse. For two years in succession it outpaced the stud farm's horses at race meetings. All over the Tien Shan Mountains songs were sung about the invincible Kok-Ala, whose "meaty neck was like a cradle and whose forelock was like unwound silk." Every time the stud farm's horse-breeders suggested to the nomads that they improve their stock with thoroughbred racers or Don stallions, the answer invariably was: "You can cry 'honey, honey,' as long as you like but that will not make it any sweeter in your mouth." Their argument was that none of the stud farm's horses had been able to beat the "ordinary Kirghiz" Kok-Ala. His victories gave the *manaps* and *bais* an instrument with which to

sow distrust among the masses for all the innovations the Soviet authorities were introducing. The issue over Kok-Ala was thus given a political edge.

At the Issyk-Kul Stud Farm no effort was spared in training Derbist, the star racer, for the decisive meeting with Kok-Ala. The race was set for the autumn of 1930. For a whole summer, the forthcoming *baiga* was discussed in yurtas all over the Tien Shans. The *bais* were likewise wide awake. They got their most experienced drovers to train the unbeatable Kok-Ala.

Tens of thousands of people rode into Frunze on the day of the race. Business came to a standstill at all the offices, and even the schools were given a holiday. The people flocked to the hippodrome. And on that morning, when the gaze of all Kirghizia was focussed on the race track of the Frunze hippodrome, Kok-Ala, said to have been "sired by the wind" was the first to pass the winning post in the eight-kilometre race. The enthusiastic roar of the spectators rolled towards the Kirghiz Range and brought back by the mountain echo resounded in all the villages of the Chu Valley.

The perplexed workers of the stud farm refused to admit themselves beaten. They decided to give the horses a rest and then try again over a twelve-kilometre course. A few hours later, tens of thousands of people again joined voices to show their delight and again the roar shook the mountains. But this time the object of their delight was Derbist, who had beaten the Kirghiz racer.

Right from the hippodrome thousands of horsemen went to the Kirghiz Government offices to make sure that Derbist would be used for cross-breeding. A song was written about the horse then and there. The opening lines are:

*His nostrils are all atremble,
His ears like slivers of reed,
More beautiful than velvet is this steed.*

On that day the stud farm at Cholpon-Ata became the centre of horse-breeding in Kirghizia. The legend that had been circulated by the *bais* about the invincibility of Kok-Ala, who, they said, had been anointed by the "prophet" Daud himself, burst like a soap bubble.

The horse ointments prepared by the veterinary surgeons of the stud farm won greater respect in the mountains than the ointments of the "prophet" that used to be sold by charlatans.

More than a quarter of a century has elapsed. It took a quarter of a century for the new Kirghiz breed of horses to be born and spread throughout the republic. The host of events and "horse" incidents that have taken place in that space of time are now history. The most important of these events was, to my mind, that as it expanded the Issyk-Kul Stud Farm brought into being several other stud farms. These stud farms bore the brunt of the work that had to be done to evolve a new breed of Kirghiz horses.

This new breed is now the pride of the whole Kirghiz people—from stable-boy to poet. They have good reason for this. The horse has inherited the Don's and the thoroughbred racer's breadth of bone, size, speed, strength and harmony of build. It has splendidly developed muscles. It can pull a cart with a load of up to six and a half tons. At the same time, it has retained the most valuable qualities of the Kirghiz horses, such as a strong heart, rock-hard hoofs, great fecundity, a high milk yield, stamina, toughness, and ability to stand long marches in the mountains and the rigid highland climate.

A cavalcade of riders on horses of the new Kirghiz breed rode out of the Naryn Stud Farm in the summer of 1953. The saddle-bags were packed to capacity. Each horse carried a weight of more than a hundred and fifty kilograms, including the weight of its rider. This was the start of a test march. For eleven hours without stopping the cavalcade followed rocky mountain trails that led it through mountain passes from valley to valley for a distance of a hundred and ten kilometres. The horses were given a half-hour's rest and then raced at top speed for another eight kilometres with the same weight in the saddle-bags. At dawn, the cavalcade turned back. The horses covered 208.8 kilometres in fifty-one hours. According to I. N. Chashkin, who is a well-known horse-breeder in Kirghizia, that was a fine achievement.

It is interesting to note that the change that has come over the Kirghiz horse in the past quarter of a century concerns not only its outward appearance, but also its character, habits—in short, everything about it. One horse-breeder told me that twenty years ago when he was given a horse to go round the nomad camps, he was

quite worn out by the end of the day. His horse could not pass a yurta without stopping for a few minutes (the rider had to have his bowl of koumiss!) and no amount of urging could make it move. On the road it stopped again whenever they met a rider (the master had to exchange a bit of gossip) Every trick of horsemanship had to be brought into play to keep it going. How was the little skewbald to know that the day of the *uzun-kulak* (long ear), the primitive Tien Shan "wireless," had passed never to return.

Dolinka. Stop any person in Frunze and ask him which is the best place around Issyk-Kul to rent a cottage for the summer, and the answer will invariably be "Dolinka, of course." In the summer people come to Dolinka not only from Frunze but also from as far away as Tashkent. They go there to enjoy the cool air and the delicious fruit and to bathe in the lake. If you want to see a model collective farm, you will be told: "Go to Dolinka."

Dolinka is situated in the western part of the Issyk-Kul Hollow, two kilometres away from Cholpon-Ata on the road to Rybachye. The site was once regarded as one of the most desolate and unattractive places around the lake.

The first settlers, peasants from Kursk and Voronezh gubernias, came here many years ago. When they arrived the best places around the lake were already occupied. This was something they had never expected but they could not very well turn back. There was bleakness wherever they looked: steep, rocky, forbidding mountains on one side of them and the lake on the other. When the weather held, the lake was blue and gentle, but as soon as a wind rose black stripes would run along its surface and the waters would heave and toss and huge waves rush shoreward breaking against the rocks with a fury that was terrible to see. The place they were offered lay in the battlefield of the winds. It was quite unsheltered.

This narrow strip of land between the mountains and the lake was covered with pebbles and crushed stone. The only vegetation were solitary *jerganak* bushes, wormwood and tufts of hard needle grass with the wind whistling in them. In this wilderness of stone there

were, however, patches of fertile soil as though some giant had once carried earth in his hands to the east of Issyk-Kul and had dropped some of it on the way. The settlers weighed the pros and cons and came to the conclusion that there was enough of this land for about ten households. And Dolinka made its appearance on the shores of Issyk-Kul.

There are three hundred households in Dolinka today and the local collective farm, the Novy Put (New Path), is one of the richest around the lake. This is a striking example of what can be achieved through industry and resourcefulness. One of the men responsible for the farm's prosperity is Alexander Shchetina, an expert stock-breeder.

Any cow that you see here is sure to be of the Alatau breed and a veritable well of milk. The horses are all of the new Kirghiz breed. The sheep bear fine fleeces. The chickens are all Plymouth Rocks. The fact that Shchetina went in exclusively for pedigree stock was the natural result of his interest in the latest achievements of science. He knows his way about the U.S.S.R. and republican agricultural exhibitions and many experimental centres and laboratories of the Kirghiz Academy of Sciences so well that he could easily take visitors around them. But it was something else that brought his name to people's lips—he compelled the stones and rocks to yield astrakhan pelts, wool, meat and milk.

Barren! This word is frequently heard in talks with Kirghiz farmers. Most of the land belonging to the Novy Put Collective Farm was barren. The desert of stone around it had always been a thorn in its side. There was nothing that could be done about it, nothing until Alexander Shchetina hit upon the idea of raising astrakhan "desert sheep," who are content if they find one blade of grass every thirty steps. He persuaded the farmers to buy some of these sheep. The animals, the first of their breed on the shore of the lake, thrived and today the collective farm has a flock of astrakhan sheep and obtains valuable pelts where only recently it did not procure so much as even a handful of wool.

The Novy Put's wastelands occupy an area of some seven thousand hectares! There are among them upland pastures that are not only far from water (that alone would not have been such a big worry) but are situated on slopes so sheer as to be out of the reach of

cattle, horses and sheep. The grass there was excellent but it could not be got at. Then Alexander Shchetina thought of yaks. Steep slopes and rugged highlands were just what they liked. Shchetina brought a hundred head of yaks from the south of Kirghizia. This caused a sensation on the lake. Today the herd has grown to five hundred head and gives the Novy Put Collective Farm milk, meat and wool.

"Some people do not find a way even when there are seven doors, but we did not have a single door," Shchetina relates. "There was nothing to feed the cows with. We had to do something about it. I tried siloing chaff."

That was the famous "Shchetina silage" made from leavened chaff mixed with flour. Everyone living on the shore of the lake remembers it. It was discussed without end, but all that has now receded into the past. The Dolinka collective farmers now silo Liming maize which they have found grows well on stony soil. But feed was still in short supply. Alexander Shchetina had another inspiration. He decided to try to evolve a new breed of cattle by crossing an Alatau bull with a she-yak so that it would be possible to keep the cows in the distant mountain pastures all year round. The first cow, called Chon-Ger, yielded three times more milk than any of the she-yaks, and the fat content was double that of the milk from Alatau cows. The collective farm now propagates yak-cows.

Lastly, there were the sheep. When the collective farm was organized it only had a hundred and forty-two rough-haired sheep. The farmers gave their sheep a "new shirt," transforming them into a fine-fleeced breed. Today the farm has seventeen thousand head of sheep. But it is not this arithmetic that interests us most. There are much more fascinating things and to describe them we must go to the shearing station where an electric shearing machine invented by Dmitry Patoka is operating.

At the station the air is filled with the hum of an electric motor and the drone of small shearing machines. The sheep are held fast on tables with the shearers bending over them. Near by are fluffy heaps of snow-white wool. After it is sheared, the sheep, big-headed and long-necked, and bleating piteously, runs to join its similarly naked brothers and sisters. Here too stands a wool-grader: this is something entirely new. After shearing their sheep collective farms usually pack

the wool into sacks and send it to the state wool purchasing office without grading it. Shchetina calculated that by doing so a collective farm loses tens of thousands of rubles. To save that money the wool had to be graded on the spot. That was not easy because wool is graded in accordance with its thickness, which is determined by the diameter of the hair and is expressed in microns. Alexander Shchetina learnt how to grade wool and taught others. And now the sacks of wool from this station bear the collective farm's trade mark and go directly to the mills. That is the "Shchetina way" in action.

Alexander Shchetina has introduced many other innovations to enable the collective farm to "shear" more money from their sheep "overkeeping" castrated rams, adding iodated salt to the sheep's rations, and so forth. But those are things for the specialist and will not interest the general reader. I shall therefore relate something quite different but which, likewise, is one of Shchetina's innumerable brain children.

One day he was walking along the collective farm's wheat field with a bitter smile on his lips as he looked about him. It wasn't as though he had not seen these fields before, but the sight of the sickly wheat fighting for life on the stony soil never failed to pain him.

Suddenly, much to his surprise, he saw clumps of tall, thickly growing wheat on some of the sandy, stone-strewn mounds in the field. He stopped and remembered that during the previous autumn, when the wheat had been harvested, sheep had been left to graze in this field and that they had been driven to these very mounds for the night. Evidently, the droppings that had accumulated there in the course of a few nights had made the mounds fertile. That meant manure should be carted to the fields from the sheepfolds. But you couldn't find it in any great quantities there. Yet what if? . . . A happy thought struck him and he smiled to himself as he hurried to the collective-farm office to see the chairman, M. Y. Smirnov.

The chairman heard Alexander Shchetina out and shook his head doubtfully, saying: "The wheat will cost us more than it is worth." Shchetina's extraordinary suggestion was that the farm should carry manure by pack-horse from the stall-camps in the mountain pastures. There were no roads to these stall-camps. "You can call them deposits if you like," Shchetina said. "The sheep have been coming to the

same places for years." The upshot of the argument was that Smirnov and Shchetina saddled their horses and rode to the mountains. The deposits of manure did indeed prove to be colossal. Here the chairman made a bold decision to build roads to the mountain pastures. Just like that.

In the spring of 1955 the collective farmers began building these roads. They worked enthusiastically, and the words of the writer Sydykbekov about "people who made spades sing" aptly describe them. They built a road to the Karagai-Bulak Ravine and another to Koisu. Soon drivers and carters brought close to three thousand tons of sheep manure from the mountains. This was mixed with mineral fertilizers and scattered about the fields. Then the collective farmers built roads to the Kurgak and Kamandu ravines, to other long-standing stall-camps, and carted manure from there. The people of Dolinka thus improved their land and are now growing close to two tons of wheat per hectare.

Twenty years ago, almost at the same time that Shchetina began his experiments, another man, Mikhail Mishin, made up his mind to transform Dolinka into a sweet-smelling orchard. He carried into effect what he had set his mind on and today there are probably more cherry-trees in Dolinka than anywhere else around the lake. Apple-trees, too—Michurin varieties such as the Bellefleur-Kitaika, Reinette Bergamotte, Slavyanka, Bellefleur Record and Reinette Burkharda, and even the Antonovka and Barvinka, which hail from the North—have struck root and adapted themselves to the climate and the stony soil.

The oldest and biggest orchard in Dolinka grows in a foothill locality virtually on stones. On all sides it is protected against the fury of the Issyk-Kul winds by stone walls. In addition, there is a belt of poplars, elms and apricot-trees forming a barrier against the wind. In the middle of the orchard there is another "wind-break" in the shape of an avenue of tall walnut-trees. These are the first nut-trees in the Issyk-Kul area and they are yielding abundant harvests. Besides apples and cherries, the orchard has pears, plums and apricots, currant bushes, raspberry canes and, lastly, peach-trees, which are also newcomers to this district. Here is what Mishin told a *Sovetskaya Kirghizia* reporter about these peach-trees.

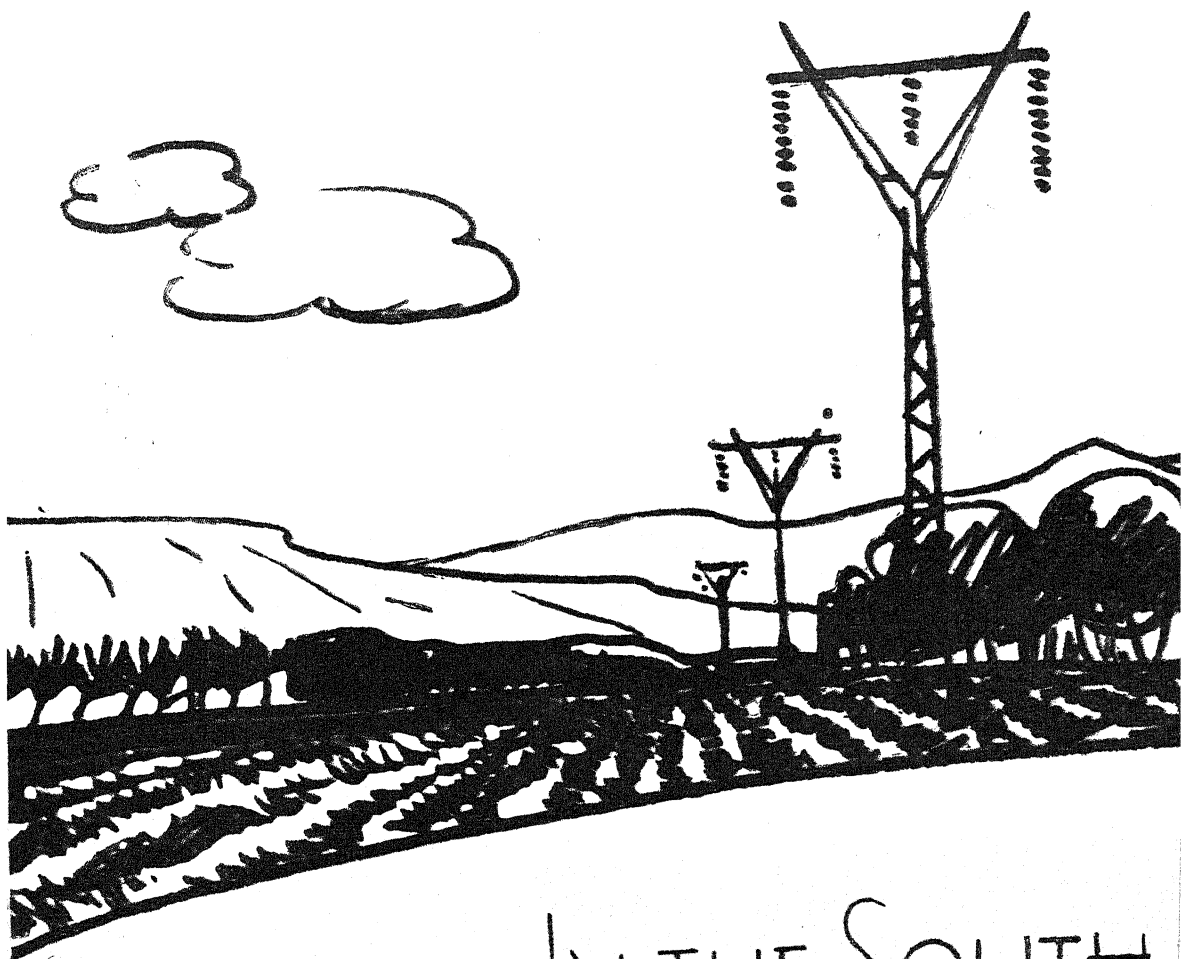
"In spring some years ago the driver of a passing truck asked

permission to stay overnight at our farm. He was transporting a consignment of saplings. These turned out to be peach saplings that were being taken by a woman from the republican experimental plant-breeding station in Frunze to the Przhevalsk base in order to see if they would grow in the mountains. We decided among ourselves that we would like to give a home to the first peaches in the Issyk-Kul area. We promised we would not spoil the important undertaking and unloaded the trees. Our friendship with science began on that day."

Friendship with science! In 1949 the first vine in the Issyk-Kul area were planted in Dolinka. Later, in 1953, nine early-ripening Michurin vines were added to the Early Pinot, Madlen-Anjevin and violet and black Muscat that had taken root and were thriving in Dolinka. The collective farm now has two and a half hectares of land under vineyards. The farm's gardener, Grigory Lomakov, will take you to the collective-farm wine cellars to taste the first wines made on the shores of Issyk-Kul. In the hands of resourceful people the stones of Dolinka have begun to yield even wine.

Friendship with People's China has likewise found an echo in Dolinka in the shape of practical deeds. Lomakov has adopted the Chinese method of planting fruit-trees on terraces. In the spring of 1956 the bulldozers from the Issyk-Kul Machine and Tractor Station cut terraces on the slopes of mountains. An orchard protected against winds by the mountain-sides has been planted on these terraces and in a few years the trees will be yielding fruit.

I could say much more about this remarkable collective farm. I could tell you how the collective farmers built their own power station (although other Issyk-Kul collective farms built theirs earlier, the people of Dolinka take pride in the fact that nowhere else on the shores of the lake is electricity put to so many uses as at their collective farm). I could also describe how the collective farmers built a water pipe-line in Dolinka. Whole bus-loads of collective-farm chairmen come to Dolinka to study its methods.



IN THE SOUTH



1. THREE TOWNS

ing its way southwards. The dazzling sun streaming into the windows our aircraft is wing-
in the air, the wings look as though they are made of burnished sil-
ver and there is the ring of sunny silence in the cabin. Our route from
Frunze to Osh lies across the massive Tien Shan ranges. Beneath us
the clouds seem to be resting on the mountains, their hazy edges illu-
minated by the sun. Like a live, quivering ball that is constantly chang-
ing its shape, the shadow of our aircraft breaks against rocks, disap-
pears over precipices and then shoots out again into the expanse of
sunlight. We are following the road of the cranes, southward.
The aircraft climbs higher and the Tien Shan ranges begin to look
as though they are the waves of a sea of stone, and the white crests re-

semble foam that had likewise turned to stone. As it leaves the last of these stone billows behind it, the aircraft enters the space over an enormous valley, south of which is silhouetted another titanic chain of ice-capped mountains. These belong to the Pamir-Alai system. Emerald-green here, malachite-green there, and as though covered with greenish foam elsewhere, the valley is specked with the white roofs of settlements and big towns. This is sunny Ferghana.

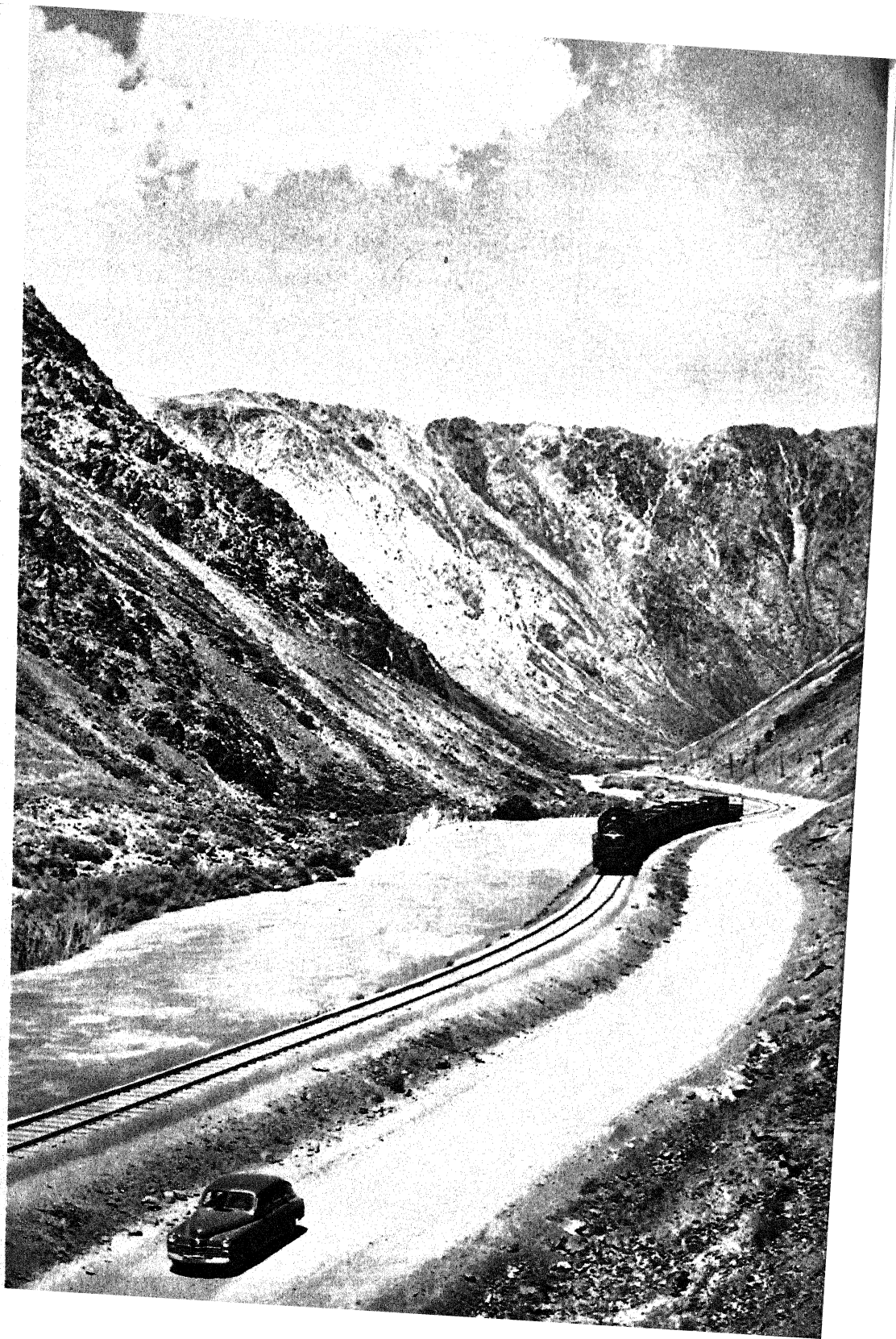
The icy crowns of the Kirghiz mountains tower around this green gem of Uzbekistan. From our aircraft we have a good view of mountains split up by ravines with swift little rivers showing white in their depths and, farther, at the foothills, cutting through chains of hills. Amid these hills in the eastern part of the Ferghana Valley lie the regional centres of Osh and Jalal-Abad, the biggest towns of Southern Kirghizia.

Situated at the foothills of the Alai Mountains, Osh is famed for its climate. Here is what Sultan Baber wrote about Osh in his memoirs back in the sixteenth century: "Orchards follow the river on either bank, the trees overhanging the water. Pretty violets grow in the gardens. Osh has running water. It is lovely there in the spring when countless tulips and roses burst into blossom. In the Ferghana Valley no town can match Osh for the fragrance and purity of the air."

Orchards still grow on either side of the clear Akbuury, which flows over a stony bed. The *ariks* continue to murmur in the streets of the town. To this day the town is famous for its flowers. Baber would have been amazed if he could see the wealth of flowers that grow in Osh today. As regards the purity and fragrance of the air, doctors have turned this to practical use. A holiday home has been built on the outskirts of the town and people come to it from all the ends of Ferghana to enjoy the clear air and the coolness.

After Frunze, Osh is the second biggest town in the republic. Its appearance makes you feel the proximity of Uzbekistan. In the streets you can meet an Uzbek cotton-grower in a national striped gown. In addition to satin with a bright Kirghiz ornament, the silk-weaving artel in Osh produces the kind of silk Uzbek women wear. It has what is known as the Margelan pattern, which is reminiscent of rainbow-like stains of oil on water. Osh has its own old town, with crook-

Frunze-Rybachye Highway where it runs through the Boom Ravine



of the emir and was famous throughout Bokhara, but the old man died penniless, blinded by the fire of furnaces.

Then he spoke of present-day Osh, of the people living in it, of its future and of the future of the potter's grandchildren, who are studying in schools and institutes and who will live to see communism. This was when Isabayev unexpectedly declaimed. "Some cherished aim you must achieve, O man . . ." The lines followed me about Osh. "Or else all dreams of glory you must leave, O man . . ." What is life worth without the dreams of man!

The road out of Osh first runs through orchards, between clay walls. The dark, reddish-green foliage of the vineyards is soothing to the eye. On the roofs of the houses you will see cherries and apricots drying in the sun.

Fields of "silver fleece," as the Kirghiz call their cotton, begin where the orchards end. The plantations are criss-crossed by *ariks* and belts of mulberry trees.

Cotton is Southern Kirghizia's chief source of wealth. The cable announcing that the bolls are opening is carried as front-page news by the newspapers in Frunze.

The most eminent people of Southern Kirghizia are leading cotton-growers. Everybody in Kirghizia knows Khaitakhun Tashirov, twice Hero of Socialist Labour, a Dungan who traversed the path from tinker to chairman of one of the biggest collective farms in the republic, the Kzyl Shark. Allya Anarov is another man who distinguished himself growing cotton. Like Tashirov, he has been twice decorated with the title of Hero of Socialist Labour and, besides, he is a deputy to the Supreme Soviet of the U.S.S.R. and a member of the Central Committee of the Communist Party of Kirghizia.

He has become almost a legendary figure. It is said that he can communicate his thoughts to the soil, and that the soil obeys him. Another legend has it that he was born beneath a cotton bush and that his mother had wrapped him in cotton wool, and that instead of toys, he had cotton balls to play with. Legends are all very well, but the true story of how he became known in Southern Kirghizia is worth any legend.

It all happened on the small Aravansai River when the water rose to flood-level after heavy rainfall in the mountains. The *daikhans*

(peasants) rushed to the maddened river, to the wall of *sipais*—huge piles lashed in threes and driven into the bed of the river. These *sipais* protected the embankment and the *daikhans* were afraid that the fuming torrent would sweep them away. If it did that, the waters would easily break down the dike, flood the fields and in an hour wash away the fruits of the labour of thousands of people and destroy the entire crop. Under the pressure of the water, the *sipais*, which were tied together with rusty cables made from wire, swayed and groaned. Suddenly, there was a loud crack as the metal wire snapped, and before the *daikhans* realized what had happened, the end *sipai* swayed, crashed into the water and, spinning, slowly floated downstream.

When that happened, a man standing on the bank threw off his robe and dived into the boiling, turbid water. His head could be seen bobbing amid the whirlpools. The crowd gasped. The man was taking a terrible risk. Followed by anxious eyes, he overtook the runaway *sipai*. Scores of hands helped to throw the end of a cable to him. The *sipai* was stopped and lashed to the bank. The dike was saved and the swimmer, climbing back to the bank, became the hero of the day. His name was on everybody's lips. That was the first time that people spoke of Allya Anarov.

But real fame came later, when he began to grow bumper crops of cotton—from sixty to eighty centners per hectare—on his field at the Communist Collective Farm, Aravan District. In 1952 it was calculated that in fifteen years Allya Anarov's team had delivered to the state enough cotton for more than eight million metres of fabric.

At the field camp of Anarov's team you will see a double-storied octagonal building with a spire built at the foot of a mountain and resembling a lighthouse when seen from a distance. This building houses a reading-room, a field laboratory, and the team-leader's office with its telephone. The verandah, with carpets spread on it, is where the team dines, rests and, in hot weather, sleeps.

This verandah has seen quite a few visitors: the plant-breeder I. N. Pishchugin, who evolved new varieties of cotton for Southern Kirghizia at the Kirghiz Cotton Experimenting Centre (which is situated in Kashgar-Kishlak close to Osh); a delegation of Uzbek cotton-growers from the neighbouring Andizhan Region; agronomists,

who came to study under Anarov's guidance, students taking a practical course; journalists.... Their conversations about agrotechniques, and their arguments and questions tell you a lot when you accompany them to the fields, but, regrettably, they are of no interest to a reader who has not imbibed the atmosphere of cotton-fields. We shall therefore pass them by. I shall only cite some purely literary notes that I made at Anarov's field headquarters.

Some women were discussing a tractor-driver, and one of them said: "He'd make even his tractor wear a *paranjah*." A grave old man told me. "At the meeting I said I would grow as many centners of cotton per hectare as the number of years I have lived on earth." He looked about sixty-five. I would say that his was an impressive commitment.... A tractor-driver was gazing at the stars. A girl went by and asked mockingly: "What are you looking at?" Without a moment's hesitation, the tractor-driver said "I'm consulting the stars." "What do they tell you?" "They're telling me that I'll be given a prize," the young man said in the same serious tone of voice. "Only I can't make out what the prize will be—a wireless set or a suit-length...."

"Anybody can climb on a small donkey," Allya Anarov is fond of saying when he sees people resting on their laurels. Another adage that I have heard him repeat is: "Modesty, when it is within limits, adorns a *jigit*." Most Kirghizes like to sprinkle conversation with adages. Two men were sitting on the verandah and, as it often happens, were arguing for the sake of argument. A third man came up, listened and said: "Hm, one says it's nineteen, the other that it's twenty minus one."

But we have digressed. Let us leave Anarov's field camp and drive across the foothills with their cotton-fields and big field camps, some of which have orchards around them and look like summer residences.

I have already pointed out that the richest collective farms in the republic are to be found in this area. Some, the Kzyl-Shark, for example, have been counting their incomes in millions of rubles for twenty years in succession.

On a country road twisting in the foothills our car stops at Otuz-Adyr, which in Kirghiz means "The Thirty Hills." This name figured prominently in the Kirghiz newspapers for years because Otuz-Adyr

is where the biggest irrigation system of Southern Kirghizia was built.

All the thirty hills with the Karatepa Steppe extending from them once resembled a threadbare robe that had been discoloured by the sun. But the desert retreated when a dam was built across the Kurshab River and a reservoir and a canal came into existence. The bed of the canal lies along high embankments, and there is even a tunnel running for four hundred metres through one of the hills. The water flowing in this canal has helped to transform Otuz-Adyr and the Karatepa Steppe into flourishing plantations of "silver ilece"

In the mid-nineteenth century, when Khan Khudoyar of Kokand ordered a mound to be built in the Ayrilam Valley for his hunting marquee and had the mound planted with trees, the water for these trees used to be brought by camel in skin gourds. Today, water has been brought to the Ayrilam Valley by the Chust-Pap Canal and it has also become an important cotton area. A big reservoir is under construction at Kara-Ungursai.

The entire foothill area surrounding the Ferghana Valley will gradually be filled with the sound of water swirling in *ariks*.

You have to visit the hills of the Ferghana Valley to appreciate the vivid colours that fill the sky in the early morning. Against the background of these colours the outlines of the excavators look severe, majestic, and the buckets, perhaps because they are black, seem enormous, much bigger than in the daytime. There are so many building projects in Southern Kirghizia that in recent years excavators have become a part of the hilly landscape. In autumn great numbers of cotton-picking machines "sail" out into the fields and they are followed by convoys of trucks that take the cotton to the mills in Osh, Karasu and Jalal-Abad.

We shall not stop at Jalal-Abad but head our car along the road leading from the town to a health resort in the mountains. On the way our car suddenly bumped over a tortoise, and commenting on this, our driver, a young Kirghiz, said:

"A long, long time ago, there lived in paradise a weigher, who underweighed and undermeasured everybody. Through the Archangel Gabriel, Allah warned this swindler on two occasions, but it did not

help. So Allah expelled him from paradise and, as punishment, turned him into a tortoise, encasing him in his own scales."

After a moment's silence, the driver smiled and added with a wink. "That is where the tortoise comes from."

People have stopped believing fairy-tales long ago, but they continue telling them with all the old rapture. Perhaps the reason for this is that Southern Kirghizia is the seat of an ancient culture, where every stone can tell a legend.

The Jalal-Abad mineral springs, which have been known since time immemorial, are likewise cloaked in legend. The story about the Jalal-Abad spring of Kyz-bulak, which means "Spring of a Maiden," is that once upon a time there lived a beautiful maiden of unfading youth. Her parents died, her brothers and sisters grew old and grey, but she remained as young and beautiful as ever, her figure was as graceful as a taut bow, as a cypress, as the letter Aleph. But the time came when the maiden's hour-glass of life began to run out and before she died, young and beautiful, she revealed the secret of her unfading youth. Every day at dawn she had bathed in the spring.

"The poetry of legends is part of our course of treatment," the head surgeon of the Jalal-Abad spa told me with a smile.

Indeed, half the salubrious effect of bathing in the hot water from these springs would have been lost if people stopped believing that the mineral waters would restore at least a part of their former health and vitality.

Legends apart, people have good reason for this belief. The hot alkali springs of Jalal-Abad, whose temperature fluctuates between 22° and 42° C., possess valuable medicinal properties. Rheumatism and liver and nervous disorders, and women's and skin diseases are treated with remarkable results, but Jalal-Abad is especially noted for the treatment it offers against kidney diseases. In this respect, doctors compare Jalal-Abad with the world-famous Cairo spa.

After you have strolled through the big park and seen its flower-beds, fountains, artificial waterfalls, ancient elms, nut-trees, acacias and oaks, the modern buildings of the health centre, and the club, and tasted the water from the springs, I would advise you to go to the far end of the park from where opens a view of the Kugarta Valley. The spa is celebrated for this view.

The broad valley with its irrigation ditches and canals and its cultivated fields stretches far below you like a piece of mosaic. Undulating lines of trees divide the sun-kissed orchards and fields into countless squares. Between the houses of the settlements with their light-coloured roofs there are tiny courtyards that look like pieces of ink-black velvet. The narrow Kugartsai River looks like a silver thread as it winds its way across the Kugarta Valley. On one side, this valley is bounded by the flat-topped Mount Aübtöo, and on the other by mountains overgrown with curly nut forests and dominated by the snow-capped peaks of Baubash-ata. As you look into the distance it seems that instead of growing dark in the distance as should normally be the case, the valley grows lighter. The impression you get is that the horizon is only a stone's throw away.

Forty kilometres out of Jalal-Abad, in the easternmost corner of the Ferghana Valley where the Alai and Ferghana ranges converge, the town of Uzgen nestles on the high bank of the Kara-Darya. Strange as it may sound, this town has dwindled into a village. Founded deep in antiquity, it is mentioned as the town of Yu in Chinese chronicles of the second century B. C. During the reign of the Karakhnids in the 11th-12th century, Uzgen was the capital of Mawarannahr, which extended over a great part of Central Asia. A minaret and three half-ruined mausoleums (the Central, Northern and Southern) survive in Uzgen to this day as reminders of that epoch.

You can spend hours in these mausoleums, and yet keep finding new things. Every detail of the architecture is made carefully with the delicate skill of a jeweller as though they were headpieces of ancient Eastern manuscripts. In Uzgen great perfection was attained by the art of carving on terracotta slabs. The ornamentation and inscriptions on the mausoleums are specimens of flat carving to various depth in the form of engravings or in a relief of nearly three centimetres. Sunlight causes a remarkable play of shadows in this relief as a result of which the walls seem to be made of open-work and the drawings on the terracotta slabs change their shape depending on the length of the shadows.

Life had drifted away from Uzgen to other Ferghana towns many ages ago. Prior to the Revolution it was a tiny town, and not even properly that. In those years any inhabited point with a market-place

was called a town in Central Asia. Uzgen was a town only in that sense. The Revolution changed the appearance of the towns of Central Asia, transformed them into industrial centres. But there was nothing to warrant the construction of factories in Uzgen, which had no roads leading to it. It became a town peopled by collective farmers. To all intents and purposes it is a big village, but out of respect for its age and monuments, it is still referred to as a town.

The Uzgen *chaikhanas* have in recent years been visited for long periods by people who promise to restore Uzgen's one-time splendour. These people are geologists and they have discovered and investigated deposits of high-grade coking coals in the vicinity of Uzgen. When pits will be built in the East Ferghana Coal Basin, the ancient town of Yu will become a town of miners. The reserves of coal are said to be very great and Uzgen will be the centre of an important mining area. But that is a matter of the future.

2. FERGHANA RING

It is a home truth that the more a man knows the more he sees around him.

There are many unusual and interesting things that you pass by without knowing that they are before you, and almost always it is a case of not being able to notice them. It is not enough to say that cultured people who travel about the world see more, no, they see incalculably more than people with a limited outlook. Things the layman never notices are seen by the botanist or the zoologist, the soil scientists or the farming expert. We can only envy them.

A journey across the mountains round the Ferghana Valley is particularly interesting if you look about you with the eyes of a geologist. A fine description has been given of just such a journey by the eminent Soviet geologist Academician D. I. Shcherbakov, who was a member of an expedition that followed the route of the Naukat Valley in the Alai Mountains.

"The road ran parallel with the river, where we had an excellent view of bared deposits of Paleozoic shale with veins of diabases and porphyry. Soon the valley began to narrow down again with diorites

Surgeon U. Kaliev of the Tüp District Hospital prepares for an operation





Memorial on the grave of Nikolai Przhevalsky, who explored Central Asia and the Far East

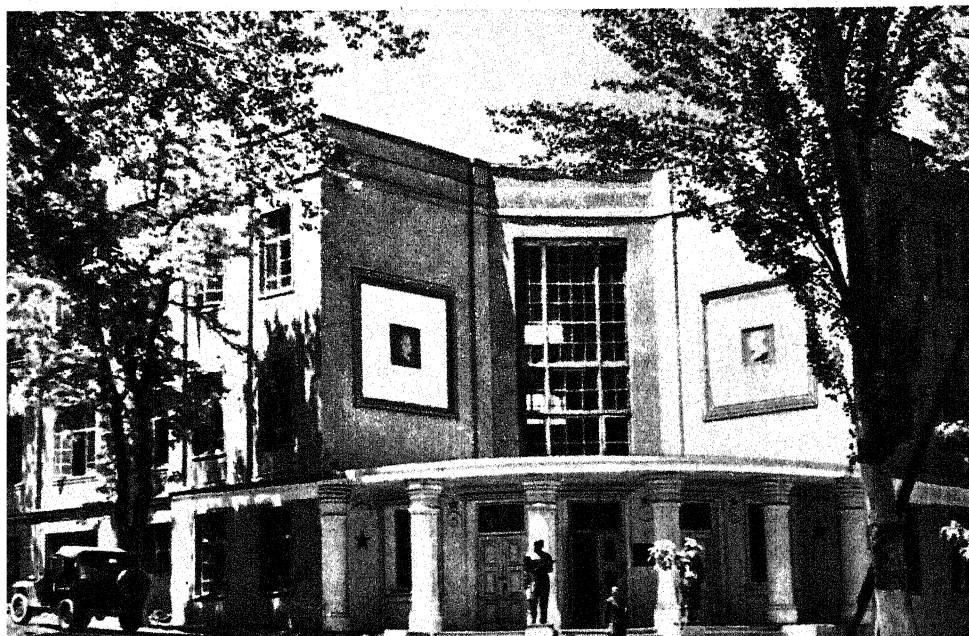


View of the Jety-Oguz Spa



Rock on the road to the Jety-Oguz Spa

Agricultural technical school, Osh



lying across its width. The hardest of these rocks have withstood erosion. Beyond them we came across a truly fantastic picture: to the right and left of us, as though clambering up a diorite mountain, there were vividly coloured layers of Cretaceous and Tertiary rocks. Crimson, brick-red, purple, yellow and white, they formed a remarkable background for the emerald green vegetation growing in the broad Naukat Hollow. Spellbound, we again stopped our britzkas and went up to the gypsum rocks towering ahead of us. An abundance of huge fossil oyster shells were scattered at their base, while a little farther off were pieces of gypsum gleaming white in the sun."

The work geologists are doing in Kirghizia has its own, unique history. One geologist, who has been working in Kirghizia for many years, told me how he investigated the mountains around Lake Son-Kul in the late nineteen twenties. His guide was a local *esepchi* (weather forecaster), a man who was regarded as a great authority on nature. Together they climbed the steep slopes, made collections of rocks and talked of geology.

Where the geologist saw multi-coloured rocks of the Tertiary, Cretaceous and Jurassic systems, where a grey colour told him of the presence of Paleozoic limestone, his guide saw traces of terrible events and mysterious predestinations. Quartz rocks with white, rounded-off ribs "turned out" to be maidens over whom a magician had cast a spell. So far as the nomads were concerned there was a magic meaning in every stone: the dolomite rocks with their shelves, the dark metamorphic shale debris, the granite chasms carved out and polished by streams, and the huge boulders covered with a desert "tan" and beaten into zigzag shape by the sun.

In 1921, when the Russian newspaper in Pishpek appealed to its readers for information about mineral ores, it did not get a single reply. The mountains were still "enchanted." The nomads were illiterate and had no use for newspapers. Ten years later, the newspaper *Sovetskaya Kirghizia* published a similar appeal and received a veritable deluge of letters in reply. Here is an extract from one of these letters. "Oil is flowing down the mountains into the Kara-Darya about twenty-six kilometres from Karasu Station in the locality of Tashik-Tash. This source of oil was noticed long ago, but, regrettably, nobody has paid any attention to it to this day. The oil continues

to flow! S " Another letter stated that during the Civil War, the *Bas-machi* made bullets from lead which they obtained in the mountains. The location of these deposits of lead was given. These letters marked the beginning of a long series of discoveries. Expeditions were sent to all parts of Kirghizia to prospect for oil, coal and other minerals.

This was followed by a systematic study of the Tien Shans. An army of geologists followed the pack-animal trails deep into the mountains where the ring of their picks and the bass hum of drills mingled with the singing of birds. The geologists pitched their tents on the slopes of the mountains and soon together with the whole country the shepherds learnt that they were treading on precious stones and coal.

The "spell" over the mountains was broken by geologists. They found fabulous wealth in a poverty-stricken land where for long ages nomads had warmed frozen fingers over the fires in their yurtas and breathed the smell of wet felt. Close to sixty of the ninety-two elements of the Mendeleyev system have been found in the Tien Shans.

In Kirghizia there is a tale about two giants who could bring down stars from the heavens and possessed unusual strength. One day they were caught in a severe frost in the mountains and to warm themselves they began to wrestle "and such was their strength that while they wrestled the heat from their bodies melted the ice off people's clothes, the camel packs and the horse harnesses, and the streams began to flow in all directions and the trees burst into blossom." This gives figurative expression to the idea that there is inexhaustible energy concealed in nature, that there is immeasurable strength in man. Through their work, Soviet geologists have transformed this tale into reality, for amidst the lifeless stones they have discovered sources of light and warmth and in the chaos of boulders they have unearthed elements from which beautiful statues can be moulded, glistening wings of aircraft cast, and health centres and ice-breakers built.

It is hard to describe the triumph and elation felt by a geologist when, having chipped a tiny piece of stone off a rock he discovers emerald-green flakes and fine, olive-green concentrations of crystals on velvety black accumulations of manganese ore. Every combination

of colour that the geologist finds on stones not only tells him the story of minerals but also fascinates him as a work of art. The colours may be dull, but if they point to the mineral the geologist has been hunting for months, he will find them exquisite.

Builders follow in the wake of geologists. Obviously, with the lack of roads it was simpler and cheaper to begin working the minerals in the Tien Shans from the rim of the mountains—from the direction of the Ferghana and Chu valleys. The first mines and pits were therefore built there and that converted the Tien Shan foothills into Kirghizia's industrial zone. A necklace of miners' towns and settlements sprang up around the Ferghana Valley.

Before going on to describe them, let me tell you the story of how one of Kirghizia's first oilfields came into existence. It was told to me by a geologist whom I met accidentally in 1937.

Several years previously he had visited a small Ferghana village with an expedition. All the available data indicated that there was oil in that area. The geologists looked for it all summer, sank many test wells, but the oil dodged them. In the evenings, the local *daikhans* gathered in the village *chaikhana*, where the geologists were staying, to talk of this and that, to share their joys and sorrows. One of the habitués at the *chaikhana* was a grey-bearded old Uigur named Illyakhun, whose orchard was famous for its peaches and apricots.

Illyakhun always sat in silence, blinking his faded eyelashes, and answered questions in monosyllables. There was an elusive disquietude in these monosyllabic replies, in this taciturnity, in the unusual way in which he mumbled his prayers before bringing the bowl of tea to his lips, and even in the constancy with which he came to the *chaikhana*. But people get used to anything and the geologists, after discussing the old man's oddities, wrote him off as a crank and paid no further attention to him.

Autumn came. Depressed by their failure to find oil, the geologists decided to leave the village and continue their search in another locality. They spent that last evening with the *daikhans* who came to

the *chaikhana*. The *daikhans* left at a late hour and the geologists turned in on the *supeh* (wooden platform serving as a bed) in the open air beneath the sky, that black autumn sky over Ferghana in which huge stars, as big as fists, twinkle amid the stardust, and falling meteorites leave a dazzling, fleeting trail.

Dawn was only just breaking when the geologist, who told me this story, was awakened by somebody tapping him on the shoulder. He opened his eyes. Old Illyakhun stood in front of him dressed for a journey. Quietly but with insistence he asked the geologist to follow him. He led the way through the sleeping village to the outskirts. The old man left the geologist's bewildered questions unanswered. At the gate the geologist saw two tightly-packed saddle-bags on the ground.

Illyakhun became loquacious as soon as they passed through the gate. He took the geologist from one tree to another, saying where he had brought it from, when he had planted it and what fruit it bore. It was the story of a man who had devoted his life to his orchard. But the geologist listened absent-mindedly, starting every time a bird flushed off a tree. He could not for the life of him understand why he had been awakened at such an unearthly hour, why the old man was dressed for a journey, and why he spoke about his orchard in such a tone.

Illyakhun's voice at last stopped, and in the silence that ensued the geologist could hear the first dry leaves of autumn scratching the clay wall as they swayed in the morning wind. The old man sighed and spoke again. He said that divine fate had brought the geologists to his village. Many years ago, when he was a young man, he had vowed he would make a pilgrimage to Kashgar, to the grave of his forefathers. He had put that off from year to year because he had not the strength to abandon his orchard. Silver had tinted his head, and still he had not fulfilled his vow. And Allah had decided to punish him. He had sent the geologists to destroy his orchard.

"Most venerable Illyakhun-bobo!" the geologist exclaimed in amazement. "Why should we destroy your orchard?"

"Stay," the old man said sternly. "It is said in the Koran: 'It was not you, but Allah who slew them. It was not you who threw what you threw, but Allah.' The Almighty has sent you because He desires

to save my soul. He kept me near you all summer to test my faith. And I understood the secret meaning of the twenty-fifth *sura*, which says: 'They turn their passions into a deity.' Have I not done so with my orchard?"

The old man's voice grew louder, his eyes shone. He squared his shoulders and said in conclusion, pointing to a hole in the ground near the wall:

"There, that is why Allah sent you to me. It is oil. Take it and may Allah always grace you with His favours!"

The geologist ran to the hole to see if there really was oil in it. With trembling fingers he seized a long rod, stuck it into the hole, moved it about and then took it out. A dark, shining, oily liquid clung to the end of the rod. There could be no doubt that this was oil, and that the hole was an open outlet such as occur in the Ferghana Valley. The geologist turned round, but the old man was nowhere to be seen. The geologist called his name but there was no reply. Still holding the stick, he ran to the gate. The saddle-bags were no longer there. He ran into the street, but there was no trace of old Illyakhun.

A year later, where the orchard had been there were tall derricks. But the orchard itself did not perish. Old Illyakhun's departure had made much too deep an impression on the collective farmers. On that memorable morning, when the geologists assembled round the oil-hole they decided that it would be unseemly to have the *daikhans* believe Soviet specialists were simply blind instruments in the hands of Allah. On the contrary, they had to strengthen the *daikhans*' respect for the human intellect, for its vigour. With the assistance of horticulturists, who came from the town, they transplanted the whole orchard.

One morning, after another year had passed, the workers in the oilfield saw an old man in ragged, dust-covered clothes. Leaning on a staff, he was looking about him in bewilderment. One of the villagers recognized him. It was Illyakhun. A crowd gathered round the old man and anticipating the joy he would experience at seeing his orchard intact, the people took him there. But Illyakhun betrayed no sign of emotion when he was led into the orchard. He sat down wearily on the grass beneath an apple-tree. Asked if he had been in

Kashgar, he replied in the affirmative. He refused to talk any more and asked to be left alone

For some time he scarcely set foot outside the orchard. People who went to see him invariably found him there pondering over something. He emphatically refused to leave his orchard and move to the oilmen's settlement. The fruit ripened on the trees around him, fell on the ground with a light thud and rotted on the grass. Sparrows twittered gaily above him as they feasted on the juicy fruit. But Illyakhun sat thinking and refused to answer questions. After a month had gone by in this fashion, he suddenly went to the director of the oilfield, said that he was giving his orchard to the oilmen and asked to be hired as a watchman. He was given the job. He moved into a cottage and at nights began to wander from one derrick to another, carrying on his shoulder an old rifle that was the mark of his office. It was loaded with gunpowder.

On one of these nights one of the drillers was delayed by some work he had to finish at a newly-sunk well. It was after midnight when he completed the job, but the night was so fine that he sat down near one of the derricks and plunged into a reverie. Suddenly he heard footfalls. Looking round the derrick he saw Illyakhun. The driller was about to call out, but seeing the old man put his gun on the ground and spread his prayer rug, he stopped himself. And he heard a most extraordinary prayer.

At first Illyakhun pronounced the usual laudations, said the night prayer, and followed it up with the words: "Oh, Most Gracious and All-Merciful, You from whom not even the weight of a particle of dust can be concealed, and everything else that is smaller than it, and bigger, be merciful to the sinner that I am. Terrible pride has taken possession of me. Day and night, to all and to each I burn to say that I and nobody else had discovered this oil in order that I should rise in people's eyes. But it was You, O All-Knowing, who foretold that earth will turn into something other than earth. And so it has come to pass and there is nothing but good in this. Forgive me, worthless mortal that I am, for daring to appropriate to myself Your good deeds. May oil, which gives people light and warmth, be blessed from now on and for ever."

The old man rose to his feet, slung the gun over his shoulder and continued on his rounds about the oilfield. In the morning when they heard the driller's story the whole settlement laughed until the tears rolled down their cheeks. But nobody so much as hinted to Illyakhun that his nocturnal conversation with Allah had become common knowledge. On the contrary, people began to treat the old man with a respect that bordered on tenderness. Only now and then, when a stranger would come to the settlement, some young fellow given to banter, would make a solemn face in the presence of Illyakhun and say, pointing to the old man.

"He was the first to discover oil here"

At this everybody would see how the pride that had taken possession of the old man, at last receiving just satisfaction, would bring a restrained smile of pleasure to his face.

Using the latest methods of prospecting for oil, geologists have discovered such huge deposits in Kirghizia that within the next few years the republic's output will increase something like eight times. In the foothills of the Ferghana Range there already are several big oilfields with numerous settlements of little white cottages.

Bagish Urmanov, an eminent oilman in Kirghizia, remembers his village as a collection of tiny hovels on the bank of a reed-overgrown river in a narrow valley. You find you cannot fit that picture to the Changyrtash of today when you walk in the streets and see the cottages with their big, bright windows or approach the oilfield and from a distance hear the hum of the powerful motors turning the turbo-drills. Kirghizia's oilfields are equipped with the most up-to-date machinery.

I cannot speak for others, but I was deeply impressed by what I saw in Changyrtash. A Kirghiz workman with a small suitcase in his hand was bending over an oil well. In the suitcase there was an echo sounder, which sends sound waves deep into the ground. The reflected echoes show the oil-level by the curves and signs they draw on a tape. If twenty years ago this workman had been told that he would be "looking through the ground" he would never have believed it.

In addition to oilfields the Ferghana industrial ring includes the new towns of Kadamjai and Khaidarkan: the streets of these towns run between hills, and the mines and metallurgical plants there produce mercury and antimony. Kirghizia is the Soviet Union's biggest producer of mercury and second biggest producer of antimony.

In Southern Kirghizia there are oilmen, metallurgists and ore- and coal-miners. Four big coal towns form part of the Ferghana ring. They are Sulukta, Kzyl-kiya, Kok-Yangak and Tashkumyr. The oldest and biggest of them is Kzyl-kiya. The history and appearance of this town reflect the history of Kirghizia's coal industry. That is why I shall take you to Kzyl-kiya.

3. RED UPHILL ROAD

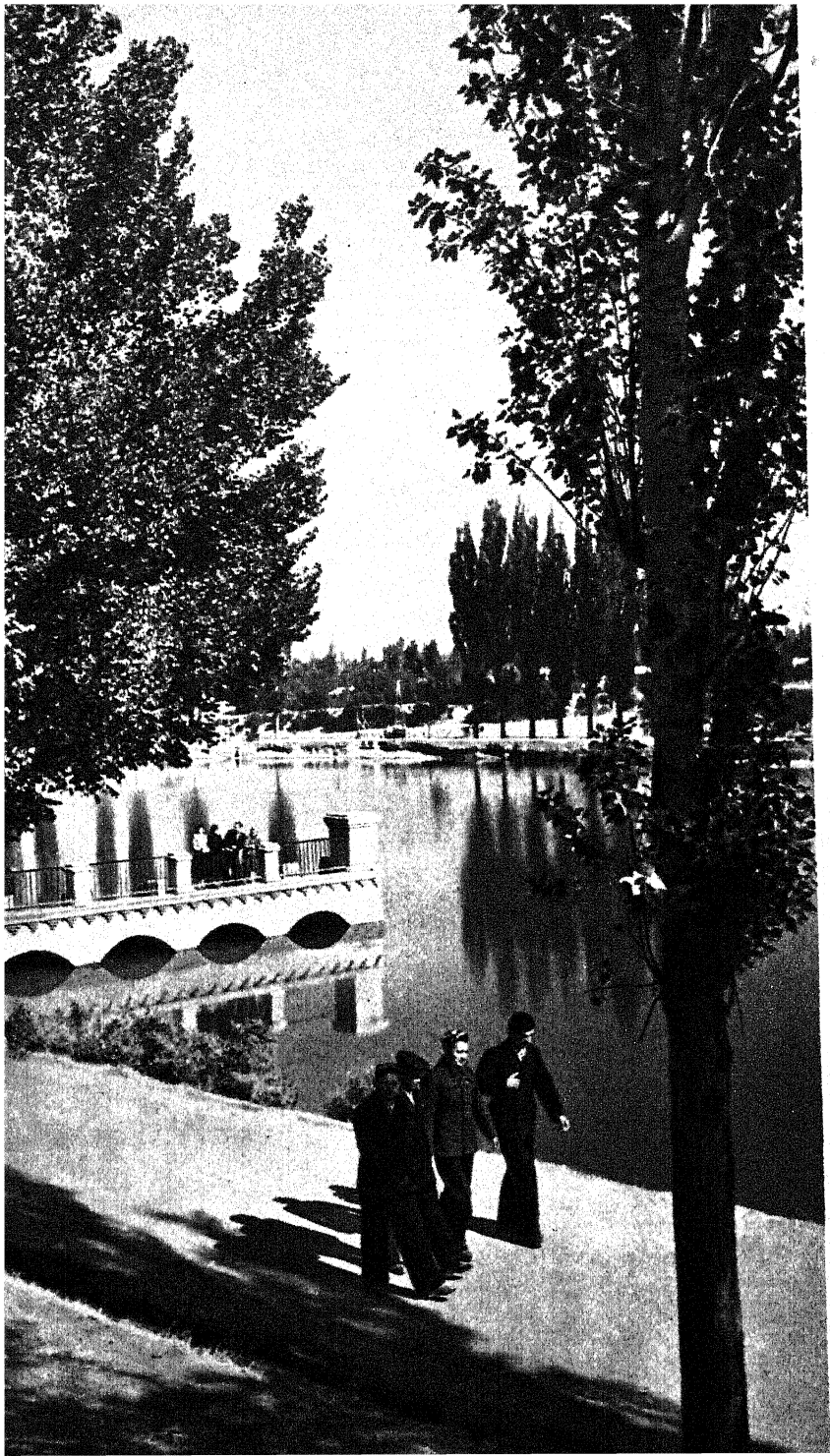
"Sow your field even as you flee," is a saying of the *kedei*, the poor Kirghiz peasants of old, who lived amidst danger but knew the value of labour. These words vividly remind me of a phrase I once heard from Leonty Solnyshko, a Kzyl-kiya miner: "Even if you have only up to noon to live, earn enough to tide you over till the evening." The veteran miner was also a wise man and knew what labour meant.

The events I am now chronicling took place in 1930. My assignment was to write a feature about miners. Instead of getting down to studying the life of the miners, I looked up Solnyshko as soon as I got to Kzyl-kiya and with the naiveté of youth began to bombard him with questions. I looked for examples that would fit a scheme I had devised beforehand: life was bad in the old days, now it was good. Let us remind you that this happened in 1930, when a revolution was sweeping through the countryside, when industrialization had just been started and the Soviet people, the builders of socialism, had at times to deny themselves many things. You can imagine how my questions must have irritated Solnyshko.

Besides, he had a stern temper. Before I was introduced to him I was told the following story. A responsible functionary from Frunze speaking at a rally in Kzyl-kiya, said: "We are proud of Comrade Solnyshko. He is irreplaceable." After the meeting, Solnyshko took the functionary aside and said in a voice trembling with anger:

Jety-Oguz River





Komsomol Lake, Osh

"Anybody who is irreplaceable should be kicked out."

That evening, among his friends, Solnyshko exclaimed:

"That man's a windbag. Would you call me a Communist and worker if I had not trained somebody who could take my place? The way he put it was that if I die the work will die with me. What that man said refers to the old regime, when a worker made a secret of his method, was afraid he would be without work and so bragged that he was irreplaceable "

In my case, too, Solnyshko taught me a lesson. He stopped answering my questions and frowned. That got me confused and I fell silent. Then with a derisive glance at me, Solnyshko said:

"I think you'd make a miner. It'll be hard for only the first ten years, after which you'll get used to it."

In reply I mumbled something that sounded like: "What's mining got to do with it? Frankly, I have no intention. . . ."

"Ah, you have no intention!" Solnyshko said in the same mocking tone. Evidently seeing from the expression on my face that he had me cornered, he changed his tone and said simply: "Do you imagine that we fought, shed our blood, just for the sake of bread, for a roof over our heads, or even for that?" He took me to the window and I saw barrels of lime and stacks of bricks and some workmen laying the foundation for a new house. "No!" he said and fixed his eyes on me.

I instinctively felt that I should keep silent. Had I in that minute asked: "Then for what?" he would probably have cut me short with a sarcastic phrase and the interview would have ended then and there. But I remained silent. Solnyshko himself asked: "Then for what?", looked sternly at me and told me the history of Kzyl-kiya.

Prior to the Revolution the miners lived in squalid mud huts huddling on the slopes of hills overgrown with wormwood, weeds and bur. Six buildings towered above the huts and they were the mining office, the owner's house, the wine-shop, the police station and two houses occupied by the guards. The labour conditions obtaining in Kzyl-kiya in those days are indicated by the name Solnyshko itself (which is the Russian diminutive for the sun) It stemmed from a nickname. The miner's working day was sixteen hours long. He used to go down into the pit long before daybreak and emerge in the evening,

after dark. He never saw the light of day from one Sunday to another. In those years Solnyshko was a carter. When he came down into the pit, the miners would ask him. "What's the weather like today?" His reply would be: "Sunny." And the name stuck.

In Kzyl-kiya, the pit itself seemed to have been adapted for the mass slaughter of human beings. A hole in the ground served as the entrance. The miner descended to the gallery in a tub. The gallery was hardly ever ventilated in spite of the fact that the coal deposits in Kzyl-kiya lie at a depth of nearly two hundred metres. Choking for want of air, sweating from the unendurable heat coming from a fire in some adjoining section, lying on their stomachs, sometimes in pools of water oozing from the soil, the miners hewed crooked drifts leading away from the gallery. With the price of timber exorbitantly high in Central Asia, the owners of the mine refused to use props, preferring the rapacious method of cutting narrow drifts through the deposits. But even these drifts frequently caved in.

"The miners went into the pit, bidding the great wide world farewell. . ." These words from a well-known song had a real and terrible meaning in Kzyl-kiya. Not a week passed without the tubs bringing to the surface the corpses of miners who had been crushed by a coal-slide, suffocated to death, or died from exhaustion.

"We worked on week-days and on Sundays we buried our dead," Solnyshko said.

There was neither a cemetery nor a priest—the mine owners thought this was superfluous as well. The dead were put in coffins, left in the chapel, and on Sunday mornings a funeral procession would leave Kzyl-kiya for the town of Skobelev (present-day Fergana). In winter the people would use the occasion for going to the bath-house in Skobelev for Kzyl-kiya did not even have a bath-house. In summer the miners bathed in a waterfall near the settlement, and in winter they washed the week's accumulation of coal dust on their bodies in Skobelev, where they buried their dead.

The story of how the miners of a tiny working-class district, lost like a grain of sand in the depths of a tsarist colony, became conscious of being a part of the working class is a vivid page in the history of Central Asia. In 1912 the miners of Kzyl-kiya, together with the whole working class of Russia, called a strike in response to the Lena

events.* In 1917, the miners of this small settlement were the only people in the Ferghana Valley to strike in protest against the shooting down of the July demonstration** in Petrograd. True, the response came belatedly, but the reason for this was that it took the issue of the Bolshevik newspaper containing an account of these events more than a month to reach this out-of-the-way district. Solnyshko was one of the leaders of that strike.

The Kzyl-kiya miners followed this strike up with the formation of a Red Guard unit, which through the revolutionary railwaymen was connected with the Communists of Tashkent. Shortly after the October Revolution the miners established Soviet power in their settlement and in January 1918 they nationalized the mines. Solnyshko was elected Deputy Chairman of the Kzyl-kiya Soviet of Workers' and Soldiers' Deputies.

In 1918, acting in unison with tsarist Army officers, the Uzbek bourgeois nationalists organized an uprising in the Ferghana Valley, seized all the towns and proclaimed the autonomy of Kokand. Units of the Red Guard were sent from Tashkent to crush the uprising. At the height of the savage fighting near Kokand, when the Red Guards were advancing inch by inch and strewing the ground with their wounded, miners, black with coal-dust, appeared in the rear of the counter-revolutionaries. They were led by a Kzyl-kiya worker named Yedrenkin, whose favourite maxim was: "You will never be able to live if you are afraid of death"

* This was the shooting of strikers at the goldfields on the Lena River in Siberia. On April 4, 1912, the strikers with their wives and children went to the management to ask for the release of members of the strike committee who had been arrested. They were fired upon by troops: 270 people were killed and 250 wounded. In reply to this atrocity, the workers of Russia called a political strike which embraced all the major industrial centres in the country. In many places the strikes were accompanied by stormy political demonstrations. More than half a million people took part in these strikes protesting against the Lena massacre.

** A spontaneous demonstration of half a million Petrograd workers and soldiers against the Provisional Government which took place on July 3-4, 1917. Troops of the Provisional Government opened fire on the peaceful demonstration on July 4.

The miners advancing against a town of a hundred thousand inhabitants did not number more than three-score. The cavalry regiment of Madamin-beg bore down upon them, but as soon as the curved sabres flashed over their heads the miners rose to their feet, filling the air with an ear-splitting "Hurrah!" and hurling their home-made hand grenades that were filled with dynamite and pieces of iron. A wall of flame shot up to the top of the poplars and the roar was so deafening that the miners themselves flinched, amazed at the effect of their invention. The enemy cavalry turned and fled in panic to the Asian part of Kokand. This panic spread like wild-fire, the counter-revolutionaries wavered and then began to scatter, and the Tashkent units of the Red Guard swiftly occupied the town.

In the summer of 1918, Lt.-Col. P. T. Etherton, the British Consul-General in Kashgar, visited the Kirghiz *bais* ostensibly with the purpose of "hunting" in the Pamirs. He established contact with the *kurbashi*, the chieftains of the *basmachi* gangs operating in Southern Kirghizia. The bands led by Irgash, Madamin-bek, Kurshirmat and other *basmachi* chieftains were armed with British weapons. In the mining settlement of Kzyl-kiya it became common to see an Uzbek *daikhan* sitting on the steps of the Revolutionary Council building and woefully telling miners how the *basmachi* had driven away his livestock, or burnt down his house or ravished and abducted his daughters. Men from all parts of the Ferghana Valley rode for help to the *kara-adams* ("black men") as the local inhabitants called the miners of Kzyl-kiya. Detachments of miners sped to help the Uzbek *daikhans* and the Kirghiz *chabans*, hunted the *basmachi* gangs, and established revolutionary order in the villages.

The *basmachi* made many attempts to crush the *kara-adams* and capture Kzyl-kiya by a surprise attack. These raids were carefully planned by tsarist army officers who had fled from Skobelev. They were aware that so long as the "Kzyl-kiya Republic" (as the miners called themselves) was in existence the Ferghana Valley would not become a domain of the whiteguards. But every raid ended in the *basmachi* being put to flight

The miners were never caught napping. Sentries were posted day and night on the clay hills around the settlement, and the settlement itself had trenches and barbed-wire barricades around it as though

it were a fortress. No sooner did two shots break the stillness of the night than the whistles of locomotives hooted the alarm. Two ancient cannons, their muzzles sticking out of the dug-outs, would begin spitting out shells with a booming that shook the ground, and the miners' rifles, carbines and hunting guns would begin to speak from the trenches. This noise alone was frequently enough to send the *basmach* back: when the miners mounted their horses and attacked, all they would see would be a hastily withdrawing cloud of dust that would screen the stars on the horizon.

The miners of Kzyl-kiya did not stop cutting coal even during the grimmest days of the Civil War. They carried their rifles and swords with them to work. At the first sound of the alarm-bell, they would throw down their picks, rush to the tub and, emerging from the pit, mount their horses that would be held in readiness at the very entrance. The skirmish with the *basmach* over, they would return to work, for Kzyl-kiya had engaged to supply the Central Asian Railway with a train-load of coal every day. This commitment was signed by Solnyshko on behalf of the miners.

In 1919, when Turkestan was cut off from Soviet Russia, when British Sepoys patrolled the streets of Ashkhabad and the *basmach* terrorized Central Asia, the fate of Soviet Turkestan was being decided by coal, by the uninterrupted work of the railway transporting units of the Red Army and military supplies. Responsibility for the whole of Central Asia devolved on the shoulders of the Kzyl-kiya workers. The miners rose to the occasion—the railway received the coal it needed. Deep in the rear of the whiteguards, the working people of Turkestan held out against the enemy to the very day troop trains carrying Red Army units under the generalship of Mikhail Frunze arrived from the North.

In Kirghiz the word *kzyl* means "red" and *kiya* "uphill road." This name, deriving from the red clay hills running up the foot of the Alai Mountains, became symbolical for the Kirghiz shepherds. But it acquired a more profound meaning after the Civil War, when Kzyl-kiya became the smithy of working-class cadres for the Kirghiz Republic. For many years the workers of Kzyl-kiya had the honourable task of educating the nomads.

Allow me to tell you of a few episodes from the life of a Kirghiz miner named Aludiyev. I made these notes back in 1930. They reflect the feeling of the majority of the Kirghizes who came to work at the mines in those years.

As a boy in his teens. Aludiyev shepherded the sheep of a *bai*. Soviet power came to him on an autumn day. That is exactly how he put it: "It came to me in the morning." He was sitting by a fire, holding his threadbare shirt close about him and shivering with cold. He looked up and suddenly saw the *bai* riding up in the company of members of the Village Soviet. Obeying the decree of the Kirghiz Government, the *bai* ceremoniously presented Aludiyev with working clothes: a new felt cloak, light raw-hide boots, cotton trousers reaching down to the calves, and a white felt cap. On top of that the *bai* did what he had never done before. He paid Aludiyev his wages: forty-five rubles in faded, yellowed bank-notes smelling of horse sweat.

Now this is what happened next July. Aludiyev was lying in the shade of a boulder, resting in the noon-day heat together with the *bai*'s flock. A blue butterfly was fluttering among the bright tulips. Aludiyev watched it with screwed up eyes and suddenly saw the belly of a horse moving between the trunks of the spruce-trees. Then he saw the gleaming bridle, and a young Kirghiz rode into the glade. He wore shining boots and a cap that looked like a pancake. Aludiyev felt hot at the sight of these unusual clothes. That is exactly what he said: "They were so funny that I felt hot." The stranger dismounted and sat down beside the shepherd.

They spoke amicably. The air smelt of wormwood, bitter grass and leather. The stranger spoke of the coal-mines in Kzyl-kiya. "You will see a fire-cart. Ten big carts tied together like camels in a caravan, and fire and smoke coming from the cart in front. This cart caravan moves on iron rods lying on the ground." These words conjured up in Aludiyev's mind an enormous caravan of carts running on thick rusty nails (he had never seen iron in any other form) and it frightened him. "You will see many yurtas standing together and on top of them other yurtas, so that they form a yurta as big as a mountain."

The stranger was a Kzyl-kiya miner. He had been sent to this remote mountain district to recruit workers. He told Aludiyev how coal was mined and treated him to some tinned beef from Kharkov. When the sun sank beyond the mountains, Aludiyev gave his consent to go to work in Kzyl-kiya.

Here is another episode that is vivid in Aludiyev's mind. The rails shone dully. A train was standing on them. Sixteen Kirghizes, who had been recruited, were squatting on their haunches near one of the carriages and examining the train's "belly." They had come a long way and now were confronted with this miracle on wheels. They were led into the carriage. The three steps were broad and convenient—Aludiyev at once appreciated this invention. Behind was a life that was poor but it was a life he knew. Now he was on his way to the unknown, and to use his own words he was going "as into a black bottle." The train's whistle blew a prolonged blast (it was almost exactly how dying camels screamed) and the platform began to recede. The train moved out of the station, passing trees that were shedding their leaves, and wooden houses. Aludiyev turned round. In the carriage, the passengers were sitting on bunks as though the bunks were rocks. Their feet dangled from the knees down and this looked funny to Aludiyev. He tried to sit like the others but found it uncomfortable. Then he climbed to his bunk, sat on it cross-legged and took out his parcel of food ...

At the mine the new workers were given accommodation in a hostel, where for the first time in their lives they saw white bedsheets, chairs and electricity. The sky could not be seen and the stars did not shine through the ceiling. The window reminded them of the train. The beds were uncomfortable, for you lay somewhere in mid-air without feeling the ground under you. They stayed in this hostel for three days. On the fourth day the workers of Kzyl-kiya saw a sight that left them dumbfounded: the sixteen new miners were erecting a yurta for themselves beneath the windows of the hostel.

Their first impressions of the mine were the overpowering smell of coal and the careful step of the small pit ponies: in those days coal was hewn in the old way and Aludiyev was put in charge of a team of ponies. The ponies were half-blind and had crooked legs. Had Aludiyev's fellow-villagers seen them they would have split their

would never have been so wonderful if Thomson and Kleist had not pointed out its beauties," Nikolai Karamzin, a famous Russian historian, used to say. But I have digressed. What I meant to say was that if you ever have the opportunity of visiting the Alai Valley climb to the top of the Alai Mountains and look about you: the view is really wonderful.

On the Osh-Khorog Highway, your car will begin the slow and tortuous climb up the mountains. At first you will see nothing but rocks and boulders: orange, yellow and red rocks; boulders shaped like colonnades, towers and walls with parapets; sun-battered rocks lying simply in heaps; rocks with dark-green and black spots showing the presence of minerals; rocks overhanging the road; rocks to the right and left and in front. And when your weary gaze begins to fancy that there are nothing but rocks in the world, a magnificent picture full of air, space and light suddenly (so suddenly that it takes your breath away) opens before you

The four dominant colours in this picture are yellow, green, white and blue. The yellow sun-scorched slopes of the Alai Mountains give way to the greyish-green valley lying below them, and then as you lift your eyes you see the Transalai Range, its jagged peaks cloaked from top to bottom in brilliant white as though cast in silver, rising at the far end of the valley, and, lastly, the intense blue of the sky, where not infrequently you will catch sight of a griffon sailing through the air, its great wings spread proudly, its horrible white head bent towards the ground.

Alexei Fedchenko was the first Russian scientist to see this panorama of the Alai Valley from the top of the mountains. He undertook his famous journey to the Alai Mountains in 1871 with his wife Olga. His was a dangerous expedition, for Ferghana and the mountains around it belonged to the Kokand khanate which was being rent by uprisings, plots and bloody inter-tribal fighting. Scientists had only a hazy idea of what the mountainous country lying to the south of Ferghana was like. Fedchenko's purpose was to fill in this gap.

He made two attempts to cross the Alai Range (at first through the Isfary Valley and then through the Shakhimardan Valley) and to see what lay beyond it, but on both occasions he was stopped by warriors of the khan. Finally, on his third attempt, he crossed the moun-

tains far to the west of our route which lies through the Isfairam Valley, and saw the Alai Valley. He named the snowy mountains on the far side of the valley the Transalai Range (the name has remained to this day) and estimated that the slanting pyramid of ice rising above the mountains must be more than seven thousand metres high (he came very near the exact figure—Peak Lenin is seven thousand three hundred and thirty-four metres above sea level). He guessed that the Transalai Range was the cornice of the Pamirs. Prior to him, the world's knowledge about this land was reduced, if we discount Marco Polo's account of his travels in the Pamirs in the thirteenth century, to what was written at a more ancient time, in the seventh century, by the Chinese geographer Hsuan Tsang. He wrote, for example, that the Pamir "is the central point of the earth and sky. There is a lake in the middle and a dragon lives in it."

From the pass Fedchenko proceeded to the Alai Valley and the clay-walled Kokand stronghold of Daraut-Kurgan. From there he surveyed the glaciers on the Transalai Mountains through a telescope, hoping to get a chance to investigate them. He tried every guile at his command to reach the glaciers, but the authorities were adamant in their refusal to permit him to do so. Fate seemed also to be working against him. To gain the favour of Ismail-toksab, the commandant of Daraut-Kurgan, on whom the issuance of a permit depended, Fedchenko gave him the last of his valuables—a watch. The same day the watch stopped. "He must have broken the spring when in his excitement he kept winding it like a child," Fedchenko later related. Ismail-toksab was disappointed, and the Russian scientist was not permitted to go to the "foothills of the sun." The unrealized dream of the great explorer is especially moving today when within our grasp we have what had been out of his reach. Here, on the crest of the range, the story about Fedchenko enhances our enjoyment of the picture of the Alai Valley. It should be noted that long before Fedchenko came to these parts this picture fascinated the Kirghizes who used to bring their sheep and horses to the valley every summer. The very word *alai*, which is an exclamation of wonder and admiration, tells of this. It expressed such profound appreciation that the Kirghiz shepherds sometimes used it as a synonym for "paradise." That is why geographers usually translate the word *alai* as "paradise."

Alai is indeed a paradise. It is one of the most famous pasturages of Kirghizia. Kirghizes, Tajiks and Uzbeks have been grazing their animals in this valley for many centuries. The air is so pure and the grass so lush that the most emaciated of horses quickly recover their strength. Thanks to the elevation of three thousand metres, the summers are cool and there are none of the insects that worry animals. In the Alai Valley. . . Its beauty defies words, so let us head our car down the mountain road and as we descend slowly into the valley let us say a word or two about the road itself.

Many an interesting story could be told about the road that is now the Osh-Khorog Highway. We could, for example, recall how prior to the Revolution, when there was no road, a battalion of soldiers carrying a bell for the church of Khorog took three months to cross the Alai and Transalai ranges. Then there is the story about a truck driver from Osh, who as a young man (he lived in a tiny village in the Pamirs) started out on a long journey by swimming, yes, swimming, out of his house; he dived into a stream astride a *tursuk* (leather bag filled with air) and, with air hole tight in his left hand, used his right as an oar. In some localities the channel of a swift mountain river was the only outlet to the valley. Several years later he returned home driving a truck up a new road. Before the road was built nobody in the Pamirs had ever seen a simple wheel!

A heroic page, in fact one of the most heroic, was added to the history of the Kirghiz Republic on this road.

In 1935 winter descended on the Transalai region much earlier than had been expected. A severe frost gripped the land and snowstorms blocked the road and closed the passes two months earlier than the usual time, before the trading organizations could bring the winter's supply of food and general merchandise to the Eastern Pamirs. The Gorny Badakhshan Autonomous Region of Tajikistan found itself face to face with the spectre of famine—a winter without bread, salt, sugar and the necessities that came to form a vital part of life in the Pamirs following the establishment of Soviet power: without soap, without exercise-books for the schoolchildren, without textbooks and books. An expedition with food for the peoples of the Pamirs was fitted out by the Union Government. The route decided upon lay along the Osh-Khorog Highway.

Among the Badakhshan Kirghizes there is a legend about a mighty warrior who collected all the winds and snow of the Pamirs and hurled them at an invading force marching from the Alai Valley: the winds and the snow liked the sight of human death so much that they did not want to return to the mountains. This legend reflects reality: because of the dry air, there is indeed very little snow and hardly any wind in the Pamirs, but in the Alai Valley enough snow falls to blanket the whole of the Gorny Badakhshan. Fierce snow-storms rage most of the winter.

The convoy of tractors and trucks with food left Osh on December 2, 1935. In the Ferghana Valley there was yet no sign of winter, the cotton was being picked and the trucks raised great clouds of yellow dust. The expedition, headed by a hero of the Civil War, Oka Gorodovikov, moved up the northern slope of the Alai Range and stopped in a snowed-in village sheltered by cliffs. The whole of December was spent bringing up supplies of fuel and food to this village. On New Year's Eve, the whole expedition, including a relief detachment of frontier guards, was ready to push on.

There was such a thick blanket of snow on the road that the ends of the telegraph posts were all that remained to show the direction; at abrupt turnings they stuck out of the snow like milestones. The trailer tractors fitted with snow-ploughs would have been powerless against the snow if all the participants in the expedition did not clear the snow in front of them with shovels. The tractors, which hollowed out a deep trench in the snow, were followed by a convoy of close to two hundred trucks with food. The joke that was current among the tractor-drivers that they would have to clear the snow not only off the road but also off the entire Alai Range was not far from the truth. The rumbling of the tractors started many an avalanche, which, hurtling from the peaks and bringing down enormous masses of snow, buried the trench, and it had to be cleared over and over again.

The expedition moved at an elevation of from three to four thousand metres above sea level. At such an altitude it takes a long time to cook food, for the boiling point of water is well below 100° C; drivers have trouble with the fuel because the motors lose something like forty per cent of their efficiency; and men, even when they are not under a physical strain, distinctly hear the angry beats of

their hearts protesting against the unaccustomed atmospheric pressure and the rarefied air. The members of the expedition had to work for fifty hours at a stretch; every stop in a frost of forty degrees below zero held the threat of the motors breaking down. They had to hurry to keep within the time-table so that they would not have to eat any of the supplies intended for the Gorny Badakhshan villages.

Speed demanded unprecedented precision. Whatever the weather, the cooks went forward in the van, built snow-huts and hung the pots with meal and meat over fires at the hours prescribed by the time-table. The smoke from these "field kitchens," or, at night, the flames from the torches, was the signal for the workers on the supply truck to start chopping the frozen bread with axes and thawing it out on the exhaust pipes.

On many of the gradients the expedition found it easier to lay a new road rather than clear the snow off the old one. They blew up boulders, removed earth, and the convoy moved forward inexorably. Near Khatynart, the last of the passes in the Alai Range, one of the workers remembered that there were hot sulphur springs in the vicinity. Then and there it was decided to use the water from these springs to build an ice road. Water was poured over several kilometres of the road and the ice was notched and strewn with rubble to prevent the trucks from skidding.

No sooner did the convoy pass over the ice road and emerge from the Khatynart Pass than an unusual sight opened before them: a curtain of hard, dry snow completely concealed the Alai Valley. The rustling of the snow-flakes merged into an unending roar so that it seemed there were huge millstones at work in the valley, and the whistle of the icy wind cut into this roar. Closely following each other, the trucks descended into the storm and battled their way through the snow-drifts across the Alai Valley. The snow flew through the air about them at a speed of fifteen or seventeen metres a second. This meant that if a truck fell more than ten paces behind the machine in front of it, the road had to be cleared specially for it. The snow prevented the drivers from seeing the trucks ahead of them, and the radiators of their own trucks seemed to be only grey shadows crawling somewhere in front. The local mountaineers have good reason for calling this region of the Pamirs the "foothills of death."

The food convoy literally groped its way across the Alai Valley, clambered over the Transalai Range, negotiated several other intricate passes (of which, for example, the Ak-Baital Pass is nearly on the same elevation as Mont Blanc—four thousand six hundred and fifty-five metres) and reached the Pamir village of Murgab exactly on time, on January 15, after a journey of more than four hundred kilometres. The inhabitants of Gorny Badakhshan had not believed the convoy would reach them safely. When the news of its approach spread, the people of all the surrounding villages came to Murgab on yaks and horses. Having fulfilled its mission, the convoy turned back to Osh.

But let us return to our car, which has just passed the village of Sary-Tash in the Alai Valley and is approaching the bridge spanning the Kyzylsu, one of the tributaries of the great Amu-Darya. The waters of the Kyzylsu are quite red, brick-red in fact, and if some artist were to portray them on canvas I doubt if strict judges would believe him. They would probably accuse him of aesthetism, formalism or something else of the sort. This red derives from tiny particles of red clay, great layers of which are cut and washed away by the river along its upper reaches. In Kirghiz, Kyzylsu means, of course, "Red Water."

Below Daraut-Kurgan the Kyzylsu is joined by the Koksus ("Blue Water") and for a few hundred kilometres we find the amazing spectacle of red and blue water flowing side by side in one and the same channel. The red waters gradually absorb the blue stream and the river regains its original colour. In Tajikistan it is called Surkhob not because its colour changes there but because the people speak a different language: Surkhob is the Tajik for "Red Water."

With the exception of the remains of a clay-walled fortress there is nothing in Daraut-Kurgan to remind people of the days when Fedchenko visited it. It is now a busy centre of the Chon-Alai District. The geography textbooks in the satchels of the children hurrying to the tall secondary school contain no reference to Fedchenko and only one line is devoted to the Alai and Transalai ranges. Yet to make that single line appear in a geography textbook courageous explorers undertook remarkable and frequently dangerous journeys. Shepherds in fur-edged caps can be seen everywhere in Daraut-Kurgan, in the nar-

row streets, the shops, the hospital, the pharmacy and the club, for they are the real masters of the Alai Valley. Their "domain" is about twenty kilometres wide and close to a hundred and fifty kilometres long. Steppe grasses grow abundantly in this great expanse, which is tinted with the silver of feather-grass. There is an ancient song which says that when a breeze blows the grass in the Alai Valley undulates as gently as a prayer uttered in a chanting voice. In summer the days are hot, but at night, even in July, hoarfrost sometimes paints the grass

Kirghizia's southernmost scientific station, the Alai Experimental Livestock Farm, is in the Kara-Kala Ravine, two thousand eight hundred and fifty metres above sea level. It has bred a semi-fine-fleeced sheep that thrives in these highlands. Another of its creations is the Alai fat-rumped sheep, which is the biggest of the fat-rumped breeds. The station is making an exhaustive study of yaks, or *kutas*, as they are called locally.

The yak is a strange animal. Its long hair is dark-brown or black and on the bulls it is sometimes streaked with grey. The horns, resembling a buffalo's, are wide apart and round, but much thinner, and on old bulls they are bent inward. The hump reminds us of the bison. The tail is black and long, like a horse's. The yak grunts exactly like a pig.

The strength of a yak is phenomenal. With a load of up to three hundred kilograms it climbs up slopes that are too steep even for the sturdy Kirghiz mountain horse. Drivers working in the Alai Mountains know that where buffaloes or horses fail to drag a truck out of the mud, yaks will succeed. Two yaks can pull a truck over the worst roads. Thanks to its astonishing strength, the yak can go through a mountain of snow as though it were a snow-plough. It easily fords turbulent streams that sweep horses and even camels off their feet. Here, in addition to its strength, it is helped by its cup-shaped hoofs that give it a firm grip wherever there are stones. This shape of the yak's hoof prevents the animal from slipping on wet grass or ice.

Airan, a beverage prepared from yak's milk, is a splendid refreshment in the heat. It has a wonderful taste. Yak's milk is exceedingly pleasant to drink. It reminds one of cow's milk, but is much thicker, in fact so thick that according to a local saying a hare can dance on



Picking tobacco leaves at the Communism Collective Farm



Foothills of the Alai Alatau Range

it without sinking. This quality has attracted scientists. At the Alai Experimental Farm a group of scientists headed by V. F. Denisov have for a number of years been cross-breeding the yak with Schwyz and Kirghiz cows. The resultant cow yields rich milk and, in addition, (this is especially gratifying to the breeders) has inherited another remarkable quality from the yak, the ability to live at high altitudes.

In the Alai Valley yak calves are tethered for the night. The reason is that if they are left to graze freely, the female yaks will take their young to the snows on the mountain peaks at night. Imagine the job of bringing them back! Whenever they get the chance, yaks will roam about the snow on the tops of mountains. They are splendidly adapted to live at altitudes where all other domesticated animals perish. They have strong hearts and lungs. Their thin lips and the big, horny suckers on their tongues enable them to nibble low-growing grass that is out of the reach of even the cow. The head is so shaped that it lets the yak bore through the snow to the grass beneath it. When the weather is at its worst—in a blizzard with a wind violently tearing at the felt walls of the yurtas—the she-yaks begin to frolic. Their antics are so much at variance with their clumsy appearance that the sight is really amusing. Their tails held high, they chase each other about like goats, leaping from rock to rock on the crests of the mountains in the fiercest wind and snow-storm. This is the kind of weather yaks like best of all.

The ability of these animals to live at great altitudes is of tremendous importance for Kirghizia, for this enables the republic to make use of its highland pastures. By crossing yaks with dairy cows, the Alai animal-breeders strive to push dairy farming steadily higher up the slopes of the Tien Shans. This holds out the promise that not only the valleys but also the entire Tien Shan range will become a major producer of milk.

Electricity has come to the new state- and collective-farm settlements in the Alai Valley. The trucks and petrol tank-cars of the Alai Machine and Tractor Station have become a common sight on the dirt roads, while in the steppe expanses of the valley the same may be said of tractors, grain combines and self-propelled mowers. Fields under alfalfa, millet, and barley have reached far into the steppeland. Virgin soil is being ploughed up for the first time in the history of the

Alai Valley the black upturned soil can be seen on either side of the Pamir Motor Road.

Before leaving the Alai Valley let us take a look at the remains of ancient moraines that stretch from the foothills of the Transalai Range to the centre of the valley. There the grass is especially luxuriant, juicy and green. A black-bellied partridge flies out of your way as you walk on the grass, and a steppe lizard darts under a wild-onion bush with bright crimson blossoms. Male trout in their red- and black-spotted mating attire live in the transparent pools. Marmots sitting on stones bask in the sun.

These are the local red variety of marmot, which is nearly as big as a medium-sized dog. They are valued not only for their fur, from which the Alai shepherds make their caps, but also for their fat. Speaking in the language of zoologists, there are huge "marmot deposits" in this area. Specialists estimated that in 1934, the marmot population of the Alai Valley came close to four hundred thousand head.

In the summer the air in the Alai Valley is filled with the roar of aircraft taking supplies to the mountain-climbers' camps. The Transalai Range, Kirghizia's southernmost chain of mountains beyond which begins the mountainous territory of Tajikistan, is a popular mountaineering area: Lenin Peak (7,134 metres), Dzerzhinsky Peak (6,713 metres) and several other peaks standing over six thousand metres above sea level attract a constant stream of mountain-climbers. The conquest of Lenin Peak is an epic about which a whole book could be written. In 1934, three men, A. Abalakov, I. Lukin and N. Chernukha, reached the top of the peak, built a cairn, wound red cloth around it and crowned it with a bust of Lenin facing Moscow.

5. IN THE FORESTS OF SOUTHERN KIRGHIZIA

There is hardly a person on earth, who, no matter how burdened he is with everyday worries or how deeply he is immersed in work that he likes, does not in his hour of leisure call up the vision of some corner in the world, the one and only, the most wonderful place he has ever seen, the memory of which warms the heart and brings a

wistful sigh to the lips—in short, the corner about which men say: “I would like to live there when I retire, and when the time comes, to be buried there.” Such a place, so far as I am concerned, is the south of Kirghizia with its wild nut- and fruit-tree forests.

From the big village of Bazar-Kurgan a car takes you along the bank of the small Kara-Ungursai River. Its broad flood-lands are piled with rocks. I doubt if Kirghizia has a worse road than the one we are now travelling on. The passenger has to hold fast to escape the jolts. But the car tosses so violently that you can almost feel your insides knocking together, bones against bones, the heart against the ribs. In a word, it is a hell of a road!

A chain of blue mountains rears up above the ravine in front of you, and over them towers the snow-capped, seven-headed Peak Bau-bash-ata, with shreds of clouds clinging to it. After passing the mountain village of Charvak, you follow the bank of the picturesque Arstanbap, which is the least noisy of the Tien Shan rivers. The ravine narrows down. Thickets of hawthorn, abelia and exochorda hung with bunches of white flowers, appear near the river and grow wider with every kilometre until they approach the road. A solitary maple, ash or walnut-tree casts a shadow across the road more and more frequently. Protruding from the mass of undergrowth, lichen-covered boulders, on which lizards rest, force the road to veer now to the left, now to the right. As you advance you find the crowns of the nut-trees gradually shutting out the mountains, and beneath this canopy of leaves your car enters the settlement of Gumkhan, the centre of the Kirov timber enterprise.

The slopes of the mountains around this settlement are velvety-green with the foliage of nut-trees. In these forests you can find trees with trunks of three arms' length in circumference. The crowns of some of these giants had broken off beneath the weight of the snow in winter. Coolness wafts up from the ground which is covered with decaying leaves. Spiders' webs form a golden tapestry between the trees.

The glades are full of flowers. Here you will find grasses of the South and the North that thanks to the fertile nut-leaf humus and the humid highland air grow to an amazing height. The hollyhock is as tall and heavy with blossoms as the garden variety. Chicory, clover,

milfoil, the wild carrot, origanum, crane's-bill, Lady's bedstraw and touch-me-not are just a few of the plants growing in these glades.

In the forests there are small lakes overgrown with sedge and reeds that are the home of the musk-rat.

Tourists flock to the region of Arstanbap with its two waterfalls: the Great Falls dropping from a height of eighty metres between bare rocks in the shadow of Baubash-ata, and the fabulously beautiful 20-metre-high Little Falls.

The Little Falls rush down in several streams into a narrow, semi-circular cleft, where bushes hang to moss-overgrown, sheer rocks. Because of the angle at which the cleft faces the sun and because of the spray-filled air there is for the greater part of the day a regular rainbow at the bottom of the falls, its ends resting on the turbulent water. This has all the trappings of a miracle and no wonder that at one time the Little Falls were considered holy and attracted pilgrims. It is great fun to bathe in this waterfall. Bathers clamber up the slippery rock and, standing beneath the rainbow so that their heads almost touch it, let the icy streams beat down on them. A few moments is all that the hardest of bathers can stand under these streams, but after recovering their breath most of them rush back under the rainbow.

I visited these places for the first time about twenty years ago. My guide was a local Kirghiz hunter named Alagush Chal and we roamed about the nut-tree forests shooting mountain turkeys and roasting them over a fire on the fringe of a grove of apple-trees. We slept in smoky caves, huddling close to the fires that Alagush used to light. We saw porcupines, their needles bristled up. They shook their tails and beat the ground with their hind legs in a threatening manner and then crawled away into a wild-plum thicket. We had a glimpse of a mountain roe deer. It shot past us so swiftly I thought it was an apparition. While we sat on a mountain slope, a wild-boar, breathing heavily, came upon us. It raised its small, lacklustre eyes at us, grunted apathetically and disappeared behind a hill.

In a word this was life in a garden of wonders such as are described in fairy-tales, a marvellous garden where apples and pears and plums look down at you from the trees and beg to be eaten, where a magic wind brings showers of nuts, where birds are radiantly feath-

ered and animals trustful, and the imprints of bears' paws are to be seen on the paths.

Alagush Chal was a well-known figure in the Ferghana Valley. His yurta stood in a forest. Stocky, deeply-tanned, with three mountain-climber's badges on his breast, he appeared now and then in the narrow, dusty streets of Bazar-Kurgan. Answering greetings with a dignified nod, he would ride past the shops with children gazing enviously at his horse, the harness with its turquoise pendants, the double-barrelled gun, and the embroidered saddle-bags tightly filled with skins. The women would gaze at his short, black moustache and then start pitying him for living in the mountains all alone, without a wife. The men—the gardeners and cotton-growers—would hurry to the *chaikhana*, knowing that after selling his skins and filling his saddle-bags with groceries the hunter would go there for *manty* (Central Asian meat dumplings) and for a yarn or two.

It was in the *chaikhana* that I first met him. A crowd of people was listening to him with their mouths agape. And while he spoke it seemed that the breath of the forest hung over the iron trays and porcelain bowls with the lumps of sugar between them, a forest where mountain rams engaged each other in mortal combat over their mates, where lynxes sprang onto the backs of goats from the trees, where playful bears cause avalanches in the mountains, where wild-boards, trampling the windfallen branches and snuffling, gather on the banks of streams trickling out from beneath the roots of nut-trees.

From Alagush I heard the story of the origin of these forests. It has never been taken down or published before.

"Once long, long ago," Alagush began, "there was an old man named Arstanbap. He had a box and in that box there grew a tree of pure gold with a nightingale singing on it. If the nightingale whistled when Arstanbap opened the box, a pistachio-tree would appear. If it trilled an almond-tree or an apricot-tree would rise from the ground. And if it warbled, nut-trees would grow. And the nightingale sang on and on. . . ."

And with boastful inspiration the hunter began to imitate the different sounds of a nightingale so skilfully that all the people in the *chaikhana* fell silent and in the silence I could hear the breathing of the horses tethered outside.

"When the old man died," Alagush went on, "the box was buried in the forest. And there the nightingale sings, pleading to be allowed to see the sun, but try as they would the people cannot find it."

Alagush gave a hollow whistle and it was as though the sound came not from his lips but that it was a far-away echo in the mountains. At that moment there was a radiance about his pock-marked face. Much too round to make his face handsome, his cheekbones became even rounder than before and suggested considerable energy.

The Kirghiz shepherds too have a legend about these nut forests. According to this legend they are the remains of a great orchard that in antiquity stretched from China to the shores of the Caspian. Born in a ditry yurt, around a horse-dung fire, this tale of a wonderful forest is not altogether an invention. The fruit and nut-tree forests of Southern Kirghizia are relic forests, the remains of Tertiary forests.

The words "apple-tree forest" and "plum thickets" are strange to the human ear. But they do not surprise anybody in the Ferghana and the Chatkal ranges. Fruit and nut forests extend in huge strips on the slopes of these mountains and they are perhaps the "forest reserves of the Land of Bazar," where in the spring of 328 B. C., according to Quintus Curtius, Alexander the Great killed a lion. The eyes of Kirghiz business executives light up as soon as you mention this great wealth. "Silver forests," they say. The nut-tree has numerous uses. Furniture made from this wood is strong, light and beautiful. If the stock of a rifle is made of nut-wood you can be sure that it will not crack. Khaki dye, that is used for army uniforms, is obtained from the leaves of the nut-tree. In Jalal-Abad, a vitamin works produces vitamin C from these leaves. Curriers use a tanning extract made from the green jacket of the nuts. A mixture for linoleum and roofing paper is obtained from the shells. The ash from nutshells makes a fine fertilizer. The forest walnuts of Southern Kirghizia contain an unusually large amount of oil. Artists mix paints with nut-oil, which is noted for its durability, and furniture-makers use it for lacquers because it dries quickly.

Then take the excrescences on the nut-trees. Formed of colonies of tremendous numbers of sleeping buds, they are turned into furniture veneer. These excrescences are worth their weight in silver in the international market.

"Silver bars" weighing from one to three tons are found in the forests of Southern Kirghizia. For its caloricity the walnut is four times superior to meat and seven times superior to potatoes. Is this not wealth?

Pistachio groves occupy nearly twenty-five thousand hectares of land in the mountains of Southern Kirghizia. Tree of Life is the name given to the pistachio-tree in Ferghana, because the nuts are supposed to make people more vigorous. In addition to nuts, the pistachio-tree is celebrated for the excrescences that form on leaves attacked by plant-lice. The local name for these excrescences is *buzgunchi*. They have a high content of tannin, a splendid material for tanning leather. The *buzgunchi* also yield a fast raspberry dye that is highly valued in the textile industry. When ferrochloride is added, it turns into fast black and blue dyes.

Many of the dry eastern and western sides of the mountains in this area are overgrown with almond-trees. There are great thickets of wild plum-trees and barberry bushes. The apple-tree forests are especially big and at the close of summer the trees are heavy with bitterish and yet sweet fruit.

The nomads lived close to this wealth for ages without knowing its worth. The fruit was eaten by wild-boars and birds, and the nuts rotted on the ground. The nut and fruit forests of Southern Kirghizia stood untouched until after the Revolution. Paths were cut into them and the forest economy began to be organized properly at the close of the twenties. At the moment there are twelve large timber enterprises. Settlements with schools and clubs, power and radio stations, sawmills and wood-working shops have sprung up in the nut forests.

In the autumn, when the moist mountain wind caresses the crowns of the trees and carries far the redolence of the nut leaves, the workers of the timber enterprises gather large quantities of fruit and nuts. These forests, which occupy an enormous territory, close to eight hundred thousand hectares, yield two-thirds of the walnuts in the Soviet Union. Yet what an incalculable quantity of nuts is lost just the same! The state farms are short of hands and, as calculations show, nearly half the nut harvest falls on the ground and rots.

A Forest and Fruit Research Station of the Kirghiz Academy of Sciences is situated in these forests. The scientists are conducting interesting experiments grafting cultured cuttings to the wild-growing trees. Garden varieties of apples (Landsberg Rannette, Bauman Rannette, Rosemarine, Valvil) and pears (Olivier de Serr, Forest Beauty) grow splendidly on the wild stem. The Anna Spet, Reinklod and Altan plums graft so well to the wild plum that scientists are thinking of ennobling all the wild plums within the next few years. They have acclimatized fifteen varieties of grapes, several varieties of nuts, apricots, gutta-percha, cypress and other subtropical plants. It is but natural that the station is extensively studying the walnut, which is the main source of wealth in these forests.

Animal-breeders are doing extremely interesting work in these forests, acclimatizing animals from distant regions. To get a clearer picture of their work, let us first of all see what animals are native to these places. This can be done best in the virgin forests of the Chatkal Range, at the Arkit State Timber Enterprise, because in the Fergana Range hunters have almost completely exterminated many species of animals so that it is not easy to find them there.

The road to the Chatkal Range follows the bank of the swift Khojista. One side of the road is lined by boulders resembling monsters and giants locked in combat. Light, pearly clouds float overhead. The river roars in a rising crescendo. Thickets of hawthorn, plum, birch and willow groves dot the river bank. Dark-green fir-groves begin to show in the ravines at an elevation of one thousand three hundred and fifty metres. And then right before you looms Arkit, which is perhaps the wildest of the nut forests of Southern Kirghizia. In this wonderful corner of the world, nature seems to have brought together all the beauties of the Tien Shans.

The "blue-bird," as ornithologists call the lilac thrush, a lovely song-bird, lives in the Arkit forests and ravines. It builds its nests and sings near the booming water-falls, pitting its voice against the rumble of the stones unbedded by the water. Standing by the waterfall you will not distinguish words said right into your ear, but the magic flute of the "blue-bird" resounds triumphantly above the rolling and wailing of the water, turning it into a background, an accompaniment.



Cultivating maize shoots at the Talass State Farm

Kashgar-Kishlak Cotton Purchasing Centre





Machines pick cotton at the Lenin Collective Farm

The nests of the dormice, animals that resemble squirrel, can be spotted from afar. These nests are built on bushes or, sometimes, between the forked branches of a wrinkled apple-tree. With the help of its fluffy tail, the dormouse scrambles up the branches of the trees. It loves berries and wild plums, but also eats wild apples.

Stone martens or *suusary*, as they are called in Kirghizia, build their nests in the hollows of old trees or in clefts between boulders. Marten fur caps are prized highly by Kirghizes and it is therefore not surprising that hunters have killed off great numbers of these animals. Marten hunting has been temporarily banned and today the number of martens in these forests has begun to grow.

In Arkit I saw a Tien Shan bear up in an apple-tree. It shook the branches, climbed down and began to pick up the fallen apples. The bear was small and had light claws, white ears and light-brown fur shading off into a sand-red here and there. Tien Shan bears have been known to get into a collective-farm apiary, take the lids off the hives and eat the honey. Local people speak good-naturedly of their meetings with bears. But they heartily hate the porcupine and wild-boar, which are the scourge of the collective-farm orchards and fields.

The *kirpi-chechen*, which is the Kirghiz name for the porcupine, makes devastating night raids on orchards and vegetable fields. It begins its summer season by coming down into the valley and damaging apricot-trees, nibbling away the bark, and then turns to mulberries. When the apricots ripen it returns to the orchards. At this stage the harm that it does is not very great because it concentrates on fallen berries and fruit. But when the maize ripens in the fields, the porcupine becomes dangerous. It nibbles the stalks, felling them, and eats the grain off the ripest cobs, destroying three times as much as it can eat. It also attacks the melon-fields, making holes in the musk-melons and eating the seeds. The porcupine frequently ends its autumn season by getting at the pits in which the collective farms store carrots and potatoes.

The destruction that wild-boars cause is too well known to require description. All I shall say is that the Arkit forests teem with these plunderers and local hunters are doing their best to exterminate them. Animal- and fish-breeders are filling the forests of Southern Kirghizia with useful animals and fish from other regions. The Amu-

Darya trout from the Chon-Alai Valley has been given a new home in the Kara-Ungursai River. The rinser raccoon has been brought to the Arstanbap forests.

About the size of a small dog, this animal has a narrow mask "painted" on its face and a bushy, ringed tail. It is not related to the raccoon that was settled in various parts of the Soviet Union in recent years. The latter is a raccoon dog and is also known as the Ussuri raccoon, while the former is the American raccoon and belongs to an altogether different family.

It climbs trees excellently and is noted for its fur. It was nicknamed rinser because before eating anything it "rinses" the food in a stream, holding it with its front paws. This habit was utilized by Vladimir Durov, the famous animal-trainer. Many readers have doubtlessly seen the "raccoon laundry" at the circus: the raccoons fill a trough with water from tiny pails, then launder and rinse clothes, and hang them out to dry on lines.

The first rinsers were brought to the Arstanbap Ravine in 1936. Half-tame animals from the Tashkent Zoo, they were the off-spring of performing raccoons left behind in that city by a touring circus. The story of how they were released in the nut-tree forests is extremely interesting.

The animals were put in cages and transported by pack-horses from the Tashkent Zoo to a stream in a nut forest. As soon as the smell of decaying leaves reached them the raccoons showed signs of unusual excitement. At the stream the cages were opened and the animals scattered, disappearing in the shrubbery. They soon returned and "begged" for food. The expedition from the Tashkent Zoo had to spend quite a few days in the forest teaching the raccoons to find food and building nests for them in tree hollows: these raccoons had been born in captivity and since they had not gone through the stern school of nature they were not adapted to life in a forest.

The day of departure finally arrived. The caravan started off on its homeward journey. Waving farewell to the raccoons the expedition began to move away from the glade where it had had its camp. Unexpectedly, the raccoons came out of the shrubs and followed in the wake of the expedition. Tame animals that they were they wanted human company. The expedition had to stop. The men dismounted

and began to throw twigs at the raccoons, chasing them away. But no sooner did the caravan move on than the raccoons appeared again, following their friends. This made it quite clear that before leaving, the expedition had to break the animals' habit of trusting human beings, make them wary, and wild, and revive their wild instincts. Only after that had been done could there be hope that the animals would not perish. The tame animals had to be turned wild.

The expedition returned and pitched its tents in a new place, away from the "raccoon glade." It was decided to frighten the animals properly. At first the raccoons avoided the sticks thrown at them by climbing up the trees. They would stop and gaze with wonder at their friends who had for some inexplicable reason become unkind. They made attempts at coming close to the members of the expedition, but were invariably chased away with shouts, whoops and whistles. When the animals had been sufficiently frightened, the expedition began to "hunt" them, beating the shrubbery and bringing the raccoons to bay. When finally it became difficult to find even the tracks of a raccoon the expedition left the nut forests.

Raccoon dogs were settled in the forests of Southern Kirghizia in 1934, and three years later, in 1937, animal-breeders brought skunks to Kirghizia. These animals, which belong to the marten family, were taken not to the Arstanbap Ravine, but to the Chatkal Mountains, to the Arkit nut forests.

In the wild thickets of these magnificent forests the crowns of the trees shut out the sky so effectively that you only guess the sun is shining by the gold spots quivering in the foliage. The thick undergrowth of raspberry canes and sweet-briar bushes guards the approaches to the streams. Deep in the Tamanyaksai Ravine springs ooze out of the ground from beneath boulders overgrown with lichen. Snails and slugs crawl about the slippery stones and wild strawberries ripen near the ferns. The ravine ends at a sun-bathed slope covered with a blue carpet of blossoming geraniums with thousands of gaily-coloured butterflies hovering over them. Farther away there is a field of wild onions with the mountain wind whistling amid the sharp-pointed stalks....

There are many other delightful places around Arkit, but the most wonderful of these—and since we have gone so far it would be a

crime not to see it—is Lake Sary-Chelek. A mountain road leads down into the valley of the Sary-Kamysh River. A nut forest gives way to an apple wood. The old, wrinkled apple-trees are full of dark hollows, their trunks showing where insects have been working for years. Their crowns do not intertwine, leaving the woods in a flood of sunshine.

The road passes these woods and approaches lakes with banks overgrown with reed-mace, rushes and sedge. With their green waters they resemble steppe rather than mountain lakes. The brazen cackling of wild geese and the quacking of ducks never ceases over the banks. An eagle soaring in the sky suddenly folds its wings and with a whistle shoots down at a slant, its talons outstretched and ready to seize its prey and carry it to a nest somewhere above the clouds.

Leaving these lakes behind, the road approaches Lake Sary-Chelek. When you see it for the first time. . . . But you must stand there for a moment with your eyes closed. You are afraid that when you open them you may find no trace of the lovely landscape that had spread out before you a moment ago, that it had all been only a mirage, that you had imagined it. Its beauty has no rival on earth. A yellow bowl with blue water at its bottom and black minarets along the sides—these words, faithfully conveying the first impression, belong to the well-known botanist A. Shakhov.

“Yellow tub” is the literal translation of Sary-Chelek. Yellow boulders tower along its shores and they are so steep that it is almost impossible to get close to the water. Below them is the blue, Prussian blue, water that had been “poured” into this huge tub. Spruce and firs, looking like black candles, cling to the boulders, and birches with the dropping-soiled nests of cormorants and mergansers overhang them. Black storks stand in nests built roughly in cracks in the rocks. In the small cracks you will find orchids and ferns and moss. And all this splendour is mirrored in the water.

The scientists of Kirghizia are seeking to turn Lake Sary-Chelek and the fruit and nut forests of Arkit into a state preserve so that this corner of the Tien Shans may retain its primordial beauty.



CENTRAL TIEN SHAN



1. ROAD TO TOKTOGUL

Lying in front of you it looks like a grey lasso dropped amid the mountains. Here and there, resembling the horn of a ram it curves upward. Eagles sit hunched on the boulders above it. In the mornings clouds creep over it on their way down the slopes. Writers go into raptures over it and drivers curse it. But deep down in their hearts even the drivers are proud of this motor road running from the Ferghana Valley to the Tien Shans. And below whirls the noisy and turbulent Naryn.

I first journeyed along this road in 1930, when it was only a pack-trail with the suspension bridge across the Naryn, I can never recall without a shudder. The bridge, its logs lashed together with branches and half rotted away, swung crazily over the chasm. It was frighten-

ing just to look at, to say nothing of crossing it. Coming up to the bridge Kirghiz women and old men used to pray and then crawl across on all fours. But the young *jigits* contrived to walk across it jauntily, leading their horses by the bridles. There have been cases of horses missing their footing and crashing down against the rocks where their remains were washed away by the plunging waters of the river.

The absurd pride of youth did not allow me to crawl. I crossed the bridge as, according to my outlook in those days, befitted my manhood—upright. But it was such a horrible experience that on my way back I braved a round-about route across snow-bound passes rather than face this bridge again. It was some bridge!

“Stay, slave of the Almighty! Halt! Live! Do not die!” Such is the meaning of the name Toktogul that a farm labourer called Satylgan gave his son. In Kirghiz *tokto* means “stop, halt,” and *gul*—“slave,” implying slave of God. Prior to the Revolution, the life of the Kirghiz people could be likened to the bridge across the Naryn, death lying in wait at every step. No wonder that the boy was given a name that resembled an invocation. And fate smiled at Toktogul. He lived. More than that, he became a great *akyn*. While our car, growling at the gradients, is taking us to the Ketmen-Tübeh Valley, to the homeland of Toktogul, let us say a few words about his tragic life and about his inspired *komuz*.

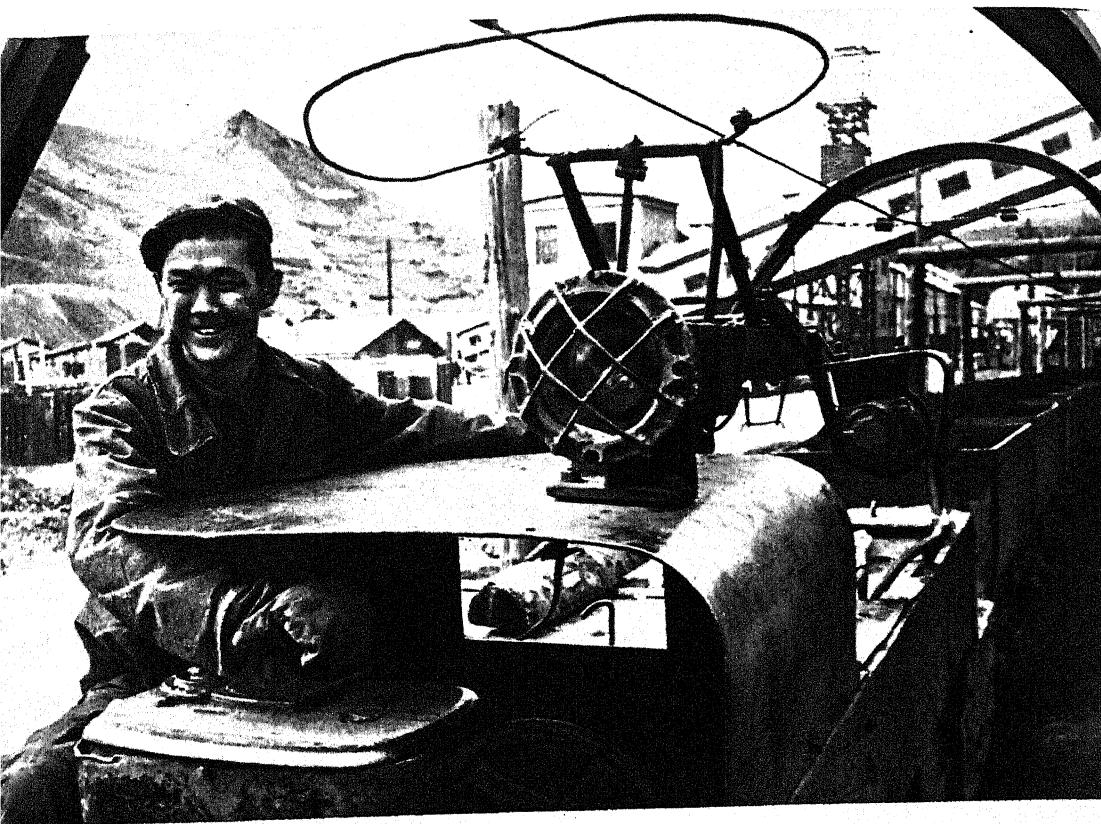
According to legend Toktogul’s *komuz* had the gift of speech: when the *akyn* ran his fingers across the strings it seemed as though the instrument spoke. Another legend has it that when it was hung in the wind, Toktogul’s *komuz* could play without human help. And the stories about Toktogul himself. . . .

We must suppose that when Burmah, Toktogul’s mother, was giving birth to her son (this happened in 1864), she was, as custom demanded, surrounded by all the women of her village.

To protect the child against the evil eye, it was not bathed until it was three years old. When Toko, as his mother affectionately called him, turned three his father put him on a horse. The soft pillow thrown across the wooden saddle delighted the little boy and he excitedly ran his chubby fingers through the long mane. The relatives

Minaret in Uzgen (11th or 12th century)





The Kok-Yangakugol Mines

who had gathered to watch this ritual expressed their approval loudly.

Toktogul and the other children spent the days climbing the rocks, wandering about the boulderstones, spying out the close marmot burrows, and catching grasshoppers. The rumble of avalanches in the mountains alarmed their little hearts. They drank from the icy mountain streams until they could drink no more and must have frequently met the hairy Tien Shan bear, which would waddle past without so much as a glance at them.

In short, the Tien Shans and the customs of the people were the cradle in which the heart and mind of the little Toktogul took shape. His mother had much to do with bringing out the poet in him. Later, in his songs, the great *akyn* spoke of his mother thus: "At night, while the light from the Little Bear shone, you fed me six times. And all the people wondered, asking whose son it was and who had reared him? Then I sucked your breast seven times while the Great Bear looked at my cradle from the heavens. It was then that you made a singer of me."

Burmah was famous in the district as a skillful teller of *koshoks*, sad half-sung tales about the departed or about girls leaving their father's roofs to be married. She told her son fairy tales and sang to him. For the rest of his life Toktogul was never to forget the sound of his mother's voice and the picture of the silver-armoured mountain peaks and the blue sky framed in the doorway of the yurt: the mountains came to life when his mother sang about a panther that picks its way among the boulders—at "noon its pupils are as small as the claw of a sparrow"—stalking mountain rams "with rainbow-like horns." Burmah allowed her son to attend popular gatherings so that he would have an opportunity of hearing famous musicians and singers. She spent her last pennies to buy him a *komuz*.

When Toktogul reached the age of eight, Kazanbek, the local feudal lord, said to his labourer Satylgan: "Stop spoiling your son. Make him work." And Toktogul became a *koichu* (shepherd). He soon learnt much of the ways of the world.

He learnt that the old meadows were the best winter pastures because the abundance of droppings on them prevented the ground from freezing quickly. He learnt that sheep had to be taken to the

pastures after sunrise, when the dew had dried and that prickly shrubbery had to be avoided otherwise sheep would leave their wool on them. He learnt that a fallen out baby-tooth had to be thrown to a dog so that "the new tooth would be sharp, straight and strong." Lastly, he learnt the real, stern side of life, which in his "Song of the Shepherds" he describes in the following way: "If I lie down behind the yurt, the goat will tread on me; if I go into the yurt the *bai's* wicked wife will scold me; the stick never leaves my poor head alone."

In the life of each man who has known strong passions there comes a day when all that had been seething within him suddenly bursts out to the surface, attracting and amazing everybody. Such a day in Toktogul's life was a contest with Arzymat, the "court" singer of Dykanbai Ryskulbekov, the lord of the Ketmen-Tübeh Valley.

Arzymat sang first. After the usual practice, he started by lauding Dykanbai, his master, and then began to ridicule Toktogul, to jeer at his poverty, his uncomely clothes. In reply, the young *akyn* sang a song which, according to eyewitnesses, made no mention either of Arzymat or of Dykanbai. This was unheard of in those days. In the presence of rich men bards were expected to devote at least a line to them. The spectators understood the meaning of this and rewarded Toktogul with exclamations of approval.

The details of this contest have, unfortunately, been lost to us. But we know that in his second song Toktogul replied to Arzymat, and his words became more scathing as he went along. We know that the spectators were thrilled by the songs of the young singer. The words of his concluding song in which he said all he thought of Arzymat, have come down to us. Here is a literal translation of the last stanza. "You sang that you live in the yurt of Dykanbai. For your flattery you are fed with mutton. Of this you boasted. You sang how you ate your fill of mutton fat and of horse guts. . . ." When Toktogul finished this song, Arzymat got up and staggered away with the spectators laughing and catcalling after him. This was an admission of defeat.

"Sweet honey and lethal poison come from the tongue." Victory over Arzymat made Toktogul famous in his home valley. He parted with the shepherd's whip and became a professional *akyn*. Although he was much in demand at "maidens' games" and other popular

gatherings, he remained as poor as before. all his worldly possessions consisted of a horse and a *komuz*. The reason for this, of course, was that he sang at poor-folk festivals, refusing to serve the *manaps* and the *bais*. The song *Alymkan*, which he dedicated to a girl he loved to distraction, relates the tragedy of his poverty. The girl was ready to elope with him, but her parents forced her to marry a rich man.

In Kirghizia people say that "death hunts beauty." The sons of the *manap* Ryskulbek tried to bribe Toktogul to compose *maktokh*, songs extolling them. Instead, he composed a *kordoh*, a song disparaging them, calling it *The Five Wild-Boars*. "What are the tears of widows and orphans to you, wild-boars! The people weep, but what care you, wild-boars!..." Ryskulbek's sons began to persecute Toktogul. They tried to strangle him with taxes. They sought to waylay and murder him. When he married Totueh, the daughter of a fellow-villager, and a son was born to him, the "five wild-boars" several times ransacked his yurta and drove away his sheep.

But the bard remained faithful to truth. So falsehood was aimed at him. Kerimbai and Bakhtiar, two of Ryskulbek's sons, denounced Toktogul to the tsarist authorities, alleging that he had taken part in the Andizhan uprising that shook the Ferghana Valley in 1898. Toktogul had nothing whatever to do with the uprising. Nevertheless he was seized by gendarmes, thrown into prison and sentenced to be hanged.

Toktogul's road to truth was fantastically difficult and long. As in many other similar cases, his sentence was commuted to hard labour. The prisoners were chained in gangs of four and put in carts. Before the carts moved off, the chained Toktogul sang his *Farewell to the People*: "My farewell greetings I send to you, my people. My beloved Ketmen-Tübeh, you have lost your nightingale..." He ended the song with lines in which he sadly compared himself to a flower torn off a tree and carried far away.

The convicts were driven along parched steppes, across treacherous shifting sands through the whole of Central Asia to Krasnovodsk. At Krasnovodsk they were thrown into the hold of a ship and taken across the stormy Caspian to Astrakhan. "Mountain ranges with their heads of grey we have left behind. Beloved valley of Ferghana, happy days, you are for ever in our mind. *Sarttar, bagish*, our kith and kin, from you have we been parted by fate unkind..." The songs Tokto-

gul composed on the way to prison and in prison are an amazing poetic autobiography. His road lay from Astrakhan through the deportation prison in Moscow to Siberia "If you stop, they prod you with a stick, if you fall they make you rise with a bayonet. They will not say: 'You are tired, sit on a horse and rest.' No, they drive you on and on. 'Go! Go! . . .'" The journey of the Kirghiz convict-poet from Andizhan to Irkutsk lasted seventeen months.

On the way to the Alexandrov Central Hard-Labour Prison, he escaped. But he was captured two months later and twelve years' hard labour were added to his sentence.

*In loneliness, bent with despair, I sit,
Before a window that is no more than a slit.
Thirty thousand soldiers around us are strung,
They speak to me, but I know not their tongue*

Toktogul was in prison for three years before his handcuffs were taken off, and another four years before his feet were unshackled. With the other convicts he laid the tracks for the railway around Lake Baikal. A singer torn away from his country and people is like a lifeless stone, doomed to silence. But not so Toktogul. He made a *komuz* from boards and used the strings from a balalaika. The Russian convicts got them for him. And he sang.

Lashed to fury by Toktogul's songs, the warden of the prison smashed the *komuz* against a stone. Then the convicts bought the Kirghiz singer an ordinary balalaika. Toktogul remade it to resemble a *komuz* and went on singing.

Longing to see his mother, wife, son and people (his prison songs are full of nostalgia), he escaped for the second time. This happened in 1905, during the first Russian revolution. "Captivity is behind me, but how am I to find the road home? If Toktogul dies here, his corpse will be thrown into a ravine. The enemy will rejoice, for my songs will die with me. Is it written that scavenger birds will peck my eyes out?" But three months later he was caught again and his sentence was increased to twenty-five years.

Five years later, after twelve years of hard labour, Toktogul broke prison for the third time. This break was carefully prepared by his Russian friends "Khariton did not find the keys, so Semyon tore the

chains off my neck. . . ." To ward off pursuit, the convicts spread a rumour that the Kirghiz singer had been drowned. Toktogul made his way to the Tien Shans across Siberia and the Aral steppes "I am pushing ahead tirelessly, driving sleep away on the road. I knock on the door and ask for food. . . . Where have you hidden, shyness that was mine? How did you bring yourself, shyness mine, to ask for alms? . . ."

He set foot on his native soil in the autumn of 1910. Painful news awaited him: his mother lived in dire need; his wife had married another; Topchubai, his only son, was dead. He composed a song, *I Have No Son*, which every Kirghiz knows by heart:

*Swans on a far-off lake
Their burning sorrow can slake.
In the steppes the grey falcon can stay
Till the wind its sorrow blows away.
O my son, can anyone anywhere
Relieve me of my despair?
O my burnt-out lantern with death-sapped oil,
My son, my shadow on native soil!
Home have I come after prison years,
At night do I wake full of hope and fears.
Listening, I peer into the dark outside,
But O my son, you have gone from my side.
You have gone where there is no return,
And I your father am left to weep and to yearn*

The people welcomed their singer with jubilation. As a fugitive he ran the risk of being captured at any moment and sent back to Siberia, but he courageously sang his *kordohs*, songs exposing the *manaps* and *bais*. For three years he wandered from village to village, and for three years the people concealed him. But in 1913, the *manaps* finally turned him over to the tsarist authorities and he was incarcerated in a prison in Namangan. This roused the people (the Kirghizes say: "For every two friends you have eight enemies," but Toktogul had eight friends for every two enemies) and they came to the assistance of their bard. Two of his pupils, the *akyns* Eshmambet and Kalyk, went about the villages of Southern Kirghizia and col-

risers ever higher in the minds of the people. It was so with Toktogul. In his songs he had expressed the proud, unbending spirit of his people, who were ready to sacrifice their all for the sake of truth.

Toktogul helped to build up the new Kirghizia. Long before the Revolution he composed songs in which he told the people how to tend the livestock and how to cultivate the soil. He was the first Kirghiz *akyn* to call upon nomad people to change to a settled way of life. We must suppose that his living in the Ketmen-Tube Valley had something to do with this.

The name itself is significant. It was the only valley in the Central Tien Shans where, in addition to the shepherd's whip, the Kirghizes used the *ketmen*, Central Asian hoe. This valley is about a kilometre and a half below the other Tien Shan valleys and the climate here is milder. That is the reason the people of this valley tilled the soil on scattered strips, which they sowed to barley and wheat. Apple orchards planted by Ukrainian settlers were to be seen here and there. The people also grew cotton.

The cotton plantations were enlarged after the Revolution, so much so that in 1929 a ginnery was built in the village of Muztor, which developed into the chief town of the present-day Toktogul District. For a long time, the camel was the only means of conveyance at the disposal of this ginnery. Caravans of close to three hundred camels used to carry the pressed cotton to the railway station in the Ferghana Valley. As the caravan route lay across the Naryn, a new suspension bridge was built in 1932 to replace the precarious old one. The decision to build this bridge was taken after Toktogul sang a satirical song about the old bridge in the presence of the South Kirghizian authorities.

I am told that in one of his songs Toktogul advocated building a motor road to the Ketmen-Tube Valley. During the last years of the bard's life, tractors were already ruling supreme in the Ferghana Valley. But it was impossible to bring farming machines into the Ketmen-Tube Valley because of the dangerous passes, and the people there continued tilling the land with the *ketmen*. One day a camel caravan appeared, bringing something many of the people had never seen before. The camel-packs contained parts of an automobile that was given the District Executive Committee as a prize for overfulfill-

Oil has been discovered in the south of Kirghizia!





Collective-farm herd of yaks at the Akbeit Pass

ing the cotton plan. This first automobile, which was assembled in the valley and for which fuel used to be brought on camel back across the mountains, made the local collective farmers want to know more about machinery. The story is that when Toktogul was given a ride in this car he used it as a platform to sing his improvised song about the need for a motor road.

This road was built by the collective farmers five years after Toktogul's death. As soon as it was finished columns of tractors moved to the fields in the Ketmen-Tübeh Valley. Trucks brought the machinery for a power station and a sound film projector. The farmers who built the road became truck- and tractor-drivers, mechanics and electricians. The road changed the economy of the valley and opened the door to a great variety of professions for the people, Kirghizes and Russians alike.

This road is now being widened, straightened and improved for it is to become part of the Great Kirghiz Highway, one of the major projects of the present day. The highway will run across all the Tien Shan ranges, from north to south, from the Ketmen-Tübeh to the Sum-samyr Valley and further to the Chu Valley, to Frunze, capital of Kirghizia. Compared with the present railway which skirts round the Tien Shan Mountains, the Great Kirghiz Highway will be four times shorter, cutting the journey from Northern to Southern Kirghizia by 800 kilometres.

Our car runs along the southern section of this road as it takes us to the broad and busy Ketmen-Tübeh Valley. At first we see the valley from the top, from the slopes of the Atoinak Mountains. The view is of symmetrical fields, a network of silver irrigation ditches and conical poplars grouped round the villages. It seems as though a piece of the industrial and collective-farm Ferghana Valley had been carried here over the snow-clad mountains.

This impression grows stronger when you descend into the valley. The dusty foliage of the cotton bushes growing on either side of the road, the farming machines in the fields, the heaps of snow-white cotton-fibre rising from behind the walls of the Muztor ginnery, the *chaikhana* in Muztor, where truck-drivers stop for a bowl of tea, and the orchards with their apple-trees and young pear- and apricot-trees and even vines make you feel you are still in the Ferghana Valley.

One of the landmarks in the Ketmen-Tübeh Valley is a red hill with two noisy rivers joining at its foot. The hill stands close to the village of Toktogul. The mountain wind rustles the leaves of the poplars, apricot-trees and barberry bushes growing round the houses. It is not a big village. The school bell can be heard from one end to the other. Fields under maize crowd amid the hills near the village. Farther away, also by the side of a small river, are the ruins of two ancient mausoleums and near them the grave of Toktogul with a simple fence round it.

The rough whitewashing on the bricks of Toktogul's tombstone is strangely in harmony with the snow-tipped peaks around the valley. The tallest of these are the Susamyr and Talass mountains. Toktogul had frequently crossed them in his wanderings. The Great Kirghiz Highway will soon cross these mountains. Our route out of the Ketmen-Tübeh Valley takes us along one of the roads through mountain passes to the Susamyr and Talass valleys, which are reputed to be among the loveliest spots in the Tien Shans.

2. "AN EMERALD IN A SILVER SETTING!"

That was what Ivan Mushketov, an eminent Russian explorer, exclaimed when he saw the Susamyr Valley for the first time. From the pass above it the valley does indeed resemble an oval emerald set in the silver of the mountain snows. In the Tien Shans there are many splendid pastures, but none come anywhere near the Valley of Susamyr. The very word Susamyr cannot be pronounced by a Kirghiz without a smile of admiration and affection.

Paths form a lace-like pattern in the green grass. Here and there a solitary willow, bird-cherry tree or a birch hangs over a stream with banks overgrown with currant shrubs. Mud-plastered sheepfolds, stone walls acting as wind-breaks, and huge ricks of hay neatly trimmed on the sides are part of the landscape. Wisps of blue smoke rise above the yurtas and houses. Bare spots on the ground show where camp-fires had burned. And then there is grass and grass again. Dogs keep a vigilant watch over the huge flocks of sheep, and horse-

men in wide-brimmed hats ride at the sides of these flocks. Such is this famous *djailoh* or summer pasture.

It would be hard to find another word in the Kirghiz language which means so much as *djailoh*. This word reveals the history of a people of animal-breeders, their way of life and many of their national traits. Pastures occupy more than half of Kirghizia, and the heart of this land of shepherds and drovers is here, in the Susamyr Valley.

Sheep, horses and cattle leave their winter pastures at the beginning of June. The days the livestock are driven to the summer pastures, to the *djailohs*, are a holiday for the entire Kirghiz people. Folk bards praise these days but drivers curse them; the torrent of sheep blocks traffic on the roads, flowing past the cars on either side. Every sheep seems bent on throwing itself under the wheels of the cars and not for nothing are the flocks led by goats, which are quieter and steadier. They allow themselves to be guided and without them the shepherds would never be able to keep the flocks in check.

"Kyr-ru! Kyr-ru!" This cry of the shepherds and the swish of the whips are heard all day long on all the roads of Kirghizia at the time the sheep move to the summer pastures. Mounted shepherds sway in their saddles above the undulating woolly deluge. Some of the shepherds have thermos flasks—a sign of our times—tied to their saddlebags. One or two camels carrying a yurta and camping gear trudge at the side of each flock.

"Kyr-ru! Kyr-ru! Kyr-ru!..." "A throwback to the old days?" you will ask. No. Today this undertaking is of state importance. The zoo-technicians accompanying the flocks and herds have first-aid outfits and sets of surgical instruments with which to attend to a cow or sheep that falls ill on the way. Veterinary stations are set up along all the roads taken by the animals because flocks and herds are driven over great distances, sometimes for hundreds of kilometres. Halting places are chosen beforehand and fodder stores are set up all along the route. Inspectors regulate the rate at which the flocks travel and see to it that the proper interval is kept between each flock. Another function of the inspectors is to watch the level of the water in the mountain streams and direct the flocks to the fords.

It is a real art to make a flock of sheep ford a stream. The entire

flock is driven to the side of the stream and the senior shepherd, after sounding the depth of the water and choosing the ford, rides into the frothing stream on a horse, dragging a leader goat after him with a rope. Following the goat, the sheep throw themselves into the water in a bunch. The idea is to have them cross the stream in a broad column with fifteen to twenty abreast, otherwise the swift-running waters will sweep them off their feet and knock them against the rocks. While it fords a stream, a flock of sheep becomes transformed into a single organism, as it were, into an unbroken, curly ribbon that twists and curves under the pressure of the water. The shepherds hold back the sheep, keeping them close to each other. And above the roar of the stream you can hear their frenzied: "Kyr-ru! Kyr-ru!"

The fords are not the only danger. There are steep paths, deep chasms, perilous mountain passes, and crevasses in the glaciers. The road to the *djailoh* has always been a hard one.

A motor road now runs from the north to the Susamyr and many other pastures of Kirghizia. This road is also part of the Great Kirghiz Highway. It is now being widened and, to the joy of drivers, a sheep lane is being built to keep the animals off it.

In the summer more than a million head of livestock are fattened in the Susamyr pastures. In the days before the Revolution they were the "private realm" of nomad feudal princes. The poor people could not even dream of letting their sheep graze there. Every summer sanguinary clan wars used to break out between the big stock-breeders over some piece of pasture. These wars are described in many Kirghiz epic tales. Today the pastures of Susamyr belong to the collective-farm shepherds.

... It is night. Pressing close around a yurta, sheep are deep in slumber, breathing evenly, their heads buried in the wool of their fellows. The lightest of sounds are heard in the stillness of the mountains. A stream is murmuring somewhere near by. The moon glides across the sky stumbling over clouds, and the peaks of the mountains, resembling enormous blocks of blue marble, are illumined by a mysterious inner light. Slowly the darkness is pushed back as, growing brighter, dazzling beams of morning light rise from behind the rim of mountains. A ragged cloud slips down a mountain-side, leaving shreds on the shrubbery. Far below, in the valley, the eye discerns the out-

lines of yurtas and houses, and a haze above the fields. But a wreathing cloud blankets the valley. The sun peeps out from between two boulders on a mountain top. A sudden gust of wind causes the grass to sway and gives the tulips a brighter hue. A shaggy sheep-dog licks its master's hand with its hot tongue. This is the morning of the shepherd, morning in the *djailoh*, in Susamyr, in the preserves of the Kirghiz people.

I know quite a few Kirghiz town-dwellers who would not exchange the sight of such a morning for a vacation in any holiday home. Many people in Frunze spend their vacations in the *djailoh*, preferring their native mountains to Sochi or Kislovodsk or any other nationally famous spa.

Have you ever watched a thunderstorm from the top of a mountain? It comes up from the ravines below, where it fills the river valley with clouds. As you look down at them the clouds, lit up by the sun, are resplendently white, but in the gaps between them you see other clouds illumined by flashes of lightning, and the sound of thunder reaches you from below. Magnificent as this sight is, the Kirghiz shepherds accept it as part of the daily run. Sometimes torrential rainfall catches up with them several times in the course of a day. In Susamyr the weather is fickle. The pastures are situated on an elevation of from two thousand one hundred to two thousand five hundred metres above sea-level and sunshine, thunderstorms and heavy rains seem to ride on a merry-go-round.

At the height of the summer the clouds gathering in the sky sometimes bring snow instead of rain. Large snowflakes plaster people's eyes and melt water streams down the boulders. The wind blows snow into the yurtas, into the fireplaces. Within half an hour the sun appears again, shining in the drops of melt water and warming the boulders so that they begin to radiate heat while they are still wet.

The usual saying that "a shepherd drives his flock" cannot be applied to Kirghizia. The Kirghiz shepherds do not drive but lead their flocks.

The shepherd walks in front of his flock and sees to it that the sheep do not bunch up so that each gets enough of the grass. A boy-shepherd follows the flock and urges on lagging animals with his whip. This sounds simple enough. But you begin to appreciate the

skill of the shepherds only after you have spent some time in the *djai-loh* and have talked to them. Your eyes will be opened to many subtleties in the work of a shepherd.

The shepherds have a golden rule, which is: before the sun grows bright in the morning graze the sheep eastward, then gradually turn them to the south and, finally, back; in the daytime, have the sheep facing their shadow so that the noonday sun does not beat in their eyes. But there is also an amendment to this rule: in hot weather lead the sheep in the direction of the wind in the morning so that on its way back to the camp during the intense noonday heat the flock moves against the wind. There are thousands of other rules to cover the speed at which a flock should move, the grasses it should graze on at different times of the year and day and in different weather, the maximum gradients and elevation, and so on.

Great ricks of hay and the tall frames of universal stackers are seen everywhere in the Susamyr Valley. Similar stackers can be seen in other parts of the Soviet Union, but in Kirghizia their role is especially important.

In Kirghizia livestock used to be at grass all year round. But in winter, a heavy snowfall is sometimes followed by a thaw and then by a savage blizzard, which forms such a thick crust of ice that even horses, those strong animals, are unable to break it with their hoofs to reach the grass. Under these conditions, the livestock used to perish en masse, sometimes throughout the whole of Kirghizia. This terrible calamity was called *jyut*.

For centuries the *jyut* was the most fearful catastrophe that could befall the nomads. Here are a few lines from a report sent in at the height of a *jyut* in the winter of 1927-28: "The sheep are chewing the wool off each other. The cattle are eating the ropes and felt on the yurtas. Horses are smashing their hoofs against the ice which they cannot break. Young animals are perishing by the thousand." In some winters, the *jyut* carried off more than half of the livestock in Kirghizia.

The haymakers who came to Kirghizia at the request of the Kirghiz Government after the 1927-28 *jyut* became the first teachers of the Kirghiz collective-farm stock-breeders. They taught the shepherds to mow hay and to stock it up for the winter. This simple measure was

an eye-opener for an entire people. It showed them that the *kyut* was not an invincible enemy.

Under these conditions mechanized haymaking was of immense importance. That is why haymaking machines—tractor-drawn mowers, two-horse and tractor-drawn rakes, pendent drag-harrows, stackers and lastly pickups, which are called “haymaking combines”—appeared in Kirghizia earlier than anywhere else. The Susamyr Valley was one of the first places to get these machines because it is the most famous *djauloh* in the republic and, chiefly, because it has been turned into an experimental grazing ground. The machines and methods tested there are introduced to all the other pastures

The experimental farm of the Kirghiz Livestock Research Institute planted Kirghizia's first artificial meadow in Chon-Kurchak, where it has a small experimental pasture at an elevation of two thousand two hundred metres. The farm sowed several varieties of grasses and mowed six and, in places, eight times as much hay as is yielded by natural pastures. This experiment was repeated in the Susamyr Valley with excellent results. Artificial meadows are now being planted in all the grazing grounds.

Every summer the Kirghiz Academy of Sciences sends an expedition to the Susamyr Valley. Botanists are studying various grasses and trying out the best varieties on experimental fields. They have begun to collect the seeds of the grasses growing wild in the Tien Shans and to sow them on cultivated soil. Zoologists are investigating the fodder properties of the grasses. They have proposed a new, scientific pasturage system and have tried it out on an experimental flock of sheep. Chemists are analyzing plants, determining which are harmful and poisonous for the livestock. Irrigation engineers are studying the regime of the Susamyr brooks and streams and searching for blocked springs. When such springs are found teams of collective farmers clear away the rubble blocking the water and let it run in ditches for the livestock and fields.

I made no slip when I said fields. Thanks to the work done by Kirghiz scientists, oats, barley and wheat sway in the wind in the heart of the Susamyr Valley on an elevation of over two thousand metres above sea level and grain combines have invaded this “land of grasses.” Moreover, in the Susamyr Valley the collective farms are

growing cabbages, potatoes, onions, carrots and mangel-wurzel. Experimental fields of maize have also appeared. In 1955 the collective farms tried growing frost-resisting grain crops. The seeds were brought from the north, from the Khibin Mountains and Siberia.

The Tien Shan shepherds are the last of the nomads in Kirghizia. As of old, they follow their flocks, moving their felt yurtas ever higher into the mountains, to the alpine pastures. Yet fundamental changes have taken place in their life. The socialist reorganization of the nomad way of life is seen most vividly in the Kirghiz "shepherd's capital"—the Susamyr Valley.

The shepherds are followed to the most out-of-the-way pastures by travelling cheese-making factories and creameries with their tents and yurtas, separators, instruments to determine the butter fat, pasteurizing machines and other modern equipment. From the pastures "beyond the clouds" the butter and cheese is sent down the mountain trails by pack animals and where these trails end the products are transferred to trucks.

In the Susamyr Valley you can meet other "nomads," people following occupations formerly unknown to these parts. A travelling library, a covered three-ton truck, makes the rounds of the valley catering for its roaming readers. Where camps are inaccessible to cars, the librarian changes to a horse and carries the books and magazines in his saddle-bags. Travelling shops carry on a brisk trade at busy cross-roads, a red flag fluttering in the wind above them so that they could be seen from afar. An ambulance is constantly on the move from one pasture to another. In the camps there are "red yurtas"—club-rooms. Near by, a shepherds' football team plays a match against a drovers' eleven. A crowd of children surround the teacher of a nomad children's playground. The yurta with the toys stands in a flowering meadow.

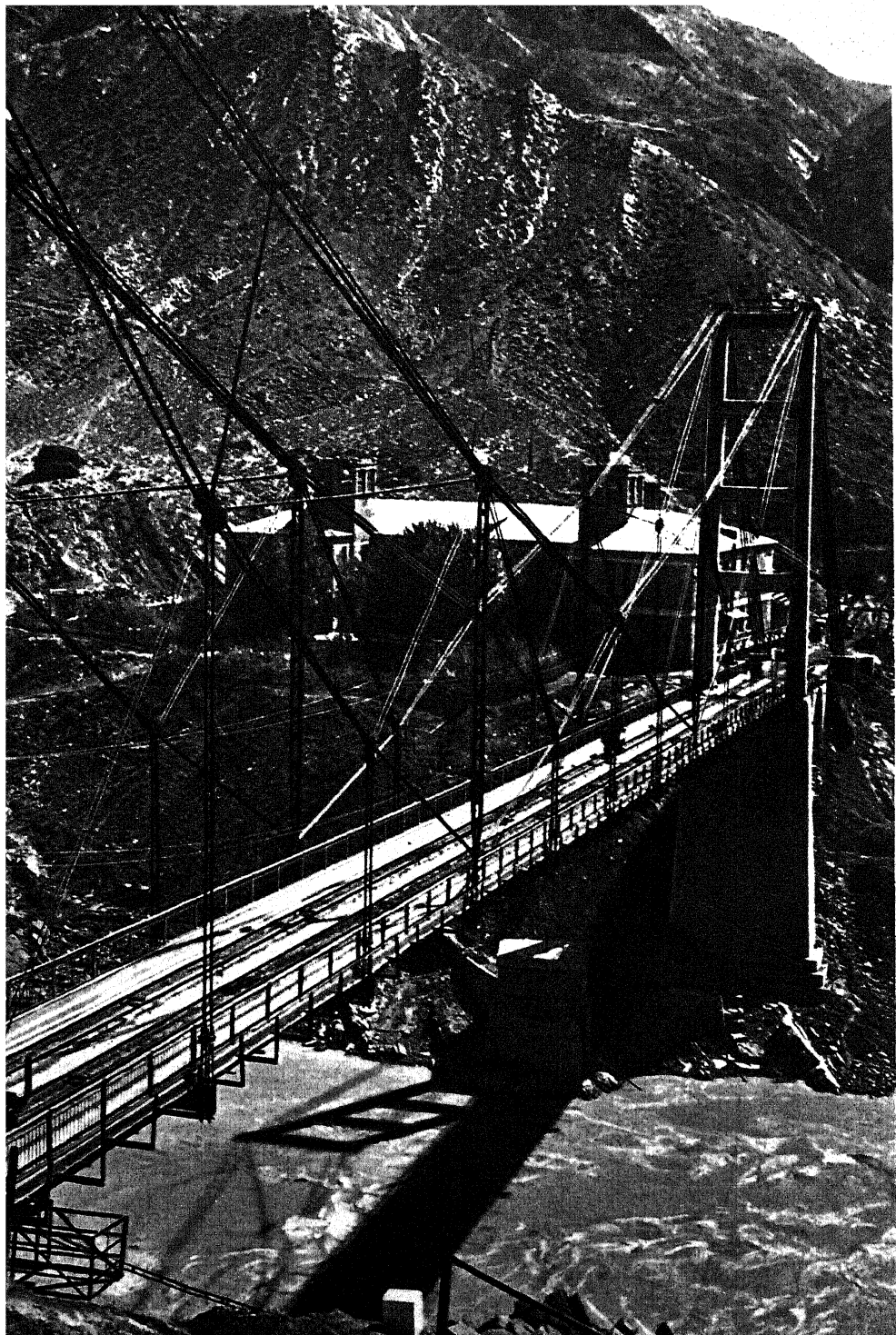
I once went to an itinerant cinema and carried away with me the picture of a bright screen against a black sky, the audience squatting on the ground or sitting on horseback, the horses nervously shifting their feet every time applause broke out. The film was in the Kirghiz language. The best Soviet and foreign films are dubbed in Kirghiz at the Frunze film studio. With his projector, screen and boxes of films loaded on horses, the cinema mechanic roams about the Susamyr Val-



Summer in the Susamyr highland pasture

Young horses of Stud Farm No. 54 at a highland summer pasture





Suspension bridge across the Naryn River

ley along the hazardous mountain trails. When the streams overflow their banks after a thunderstorm, the mechanic crosses the raging waters with the cinema equipment on his shoulder to keep it dry.

Or take the amazing spectacle of a company from the Kirghiz Philharmonic Society or a theatre performing right in the *djailoh*. The actors make up in a bus that stands amid the field flowers. The concert *décors* are nailed to posts on a light, collapsible stage. Most frequently this is a fabulously beautiful yurta. If there is a piano, it is placed in position on a truck.

The audience fills the natural mountain amphitheatre in front of the stage.

The first row is occupied by the *aksakals*, who sit on stones, pieces of felt, blankets or right on the ground. The "seats" behind them are taken by shepherds in wide-brimmed hats, tractor-drivers in overalls, zootechnicians and veterinary surgeons in white robes, women in their best dresses, and children. Along the sides and in the back sit the mounted spectators, their arms proudly akimbo. And all around this improvised theatre there are the mountain sides and the carpets of grass and flowers.

In the *djailohs* the concerts last eight and sometimes ten hours with short intermissions. The audience sits rooted to the seats; it never tires and keeps asking for more. If a concert lasts into the night, fires are lit around the stage and the flames throw a fanciful light on the actors. There is always a crowd of a dozen or so admirers who follow the touring company from village to village and watch the same concert or play several times.

The Susamyr Valley has its own administrative centre. It arose in the past few years at Kamenniye Vorota (Stone Gates), where the Karakol and the Susamyrka meet. The new settlement has not yet been named and you will not find it in maps. Therefore, we shall call it Kamenniye Vorota.

A new bridge across the fast Susamyrka leads to Kamenniye Vorota, a settlement of frame houses with slate roofs. Here you will see fuel tanks and the tractors and other farming machinery of the Susamyr Machine and Tractor Station parked beneath wide awnings. Near by is a hospital, a school, a veterinary centre, a canteen, a bakery and a shop. Moreover, at Kamenniye Vorota there is a power sta-

tion, a windmill, a club, a re-broadcasting station, a bath-house and two-flat houses for the tractor drivers, milkmaids, cattle-farm workers, swineherds and shepherds. In the evenings, the mountain stream reflects electric lamps. Trucks and tractors snort in the streets.

"But what about autumn?" you will ask. "Does life come to a standstill in Kamenniye Vorota in autumn, when the sheep and horses are driven out of the valley?" Not at all.

People used to think that it was impossible to winter in Susamyr because of the heavy snowfalls and the frosts that reach 30-40 degrees below zero. How was the Kirghiz shepherd to safeguard his flocks under such conditions? In 1949, as an experiment, two Chu Valley collective farms, the Vostok and the Krasny Geroi, left small herds of horses to spend the winter in Susamyr. Some of the slopes in Susamyr are steep enough to let the wind blow the snow off them, and the horses can get at the fodder through the thin layer of snow. Towards the end of the long winter, however, when the mountain-sides became covered with ice after the first thaw, the horses had a hard time finding food and they had to be flown out of the valley. But this experiment showed that if cattle-houses are built and if a reserve supply of hay is stocked up animals can be kept in Susamyr all through the winter.

In 1950, carpenters, bricklayers and plasterers came to Susamyr. Trucks brought timber, nails and glass. Cattle-houses with slate roofs, stables, sheep-folds and even pigsties appeared in various parts of the valley. These premises were adapted for use in winter. Comfortable homes were built for the stockmen, and a machine and tractor station was opened at Kamenniye Vorota.

Today, when ice binds the Susamyr streams and the roll of their waters is stifled beneath its heavy, greenish crust, horses and sheep continue grazing on the mountain sides. Their number is, of course, considerably smaller than in summer. The shepherds wear fox-fur caps, and the felt cloaks over their shoulders cover their mounts to the tail. Icicles form on their moustaches, beards and eyebrows, and their outer garments are white with snow-dust.

Thousands of horses and sheep turn the snow into slush as they nibble the grass. And the shepherds are easy in their minds. The Kirghizes say "A fat sheep fears no cold." When ice covers the pastures,

the machine and tractor station sends tractors with harrows to break it. Moreover, hay and silage is stocked up against emergencies. In 1955 forty thousand sheep, more than five thousand horses and a large number of cattle and pigs spent the winter in Susamyr. Winter Susamyr has ceased to be a desert of snow. It has been transformed into a zone of life, and the centre of that zone is the settlement of Kamenniye Vorota.

That is only our name for the settlement, but before long it will receive an official name. Let us hope it will be a ringing, poetic name that will harmonize with the warm response you read in the eyes of every Kirghiz when you happen to mention Susamyr in his presence.

3. AT THE SOURCES OF THE TALASS RIVER

The peaks of the Talass Mountains resemble white marquees. An eagle is so high in the sky that it looks no bigger than a lark. Dusk creeps over the land. A river wages an incessant battle against the rocks. And while the last rays of the setting sun caress the crest of the Talass Mountains, painting them a fiery crimson, while the light slowly goes out and two golden cloudlets hang above the mountains, I shall tell you about *Manas*, a Kirghiz epic poem where much of the action takes place in the Talass Valley.

Chokan Valikhanov, the nineteenth-century Kazakh enlightener, wrote: "*Manas* is an encyclopaedic collection of all Kirghiz myths, tales and legends set in one and the same time and grouped around one personality, the warrior *Manas* . . . It may be called the *Iliad* of the steppes." Here is what Academician Radlov wrote: "Like the epic poems of the Greeks, this epos gives a vivid picture of the spiritual life and customs of an entire people; in epic form it portrays wars, courtship, funeral feasts, horse racing, domestic life. . . ."

"May your voice ever delight us," people say to a narrator when he begins the tale about *Manas*, his son *Semete*h and his grandson *Seitekeh*. For many centuries narrators of folk tales, called *manaschis*, were the Kirghiz people's books and theatres. To heighten the impression made by the tale, the *manaschis* accompany the narration with mimicry, gestures and music. It is hard to find a Kirghiz who

does not know some passage from *Manas* by heart. The proverbs, sayings and songs from this epos are quoted in everyday speech. It would take close to six months to recite the whole of this epos of four hundred thousand lines of verse. If published in book form it would take up something like twenty thick volumes

The warrior Manas, the epos tells us, "was born when ice lay thick on the land," and for that reason cold and disease were powerless against him. The key theme of this epic poem is the story of how Manas gathered together the scattered tribes of his people to beat off the foreign invaders. Against this background are given sweeping pictures of historical events and of the life of the peoples of the whole of Middle and Central Asia.

*In this ancient tale you will find
Truth and untruth interwoven, intertwined.
The setting is in days far, far away,
No witnesses walk the earth, anyway.
There's not a man alive whom those wonders
transfixed.
Fact and fable are here intermixed,
Old tales are these of departed days,
Antiquity's inerascable trace.*

A story is told about the *manaschi* Keldybek, who lived in the late eighteenth century, that when he used to begin narrating the epos, he would say: "Let the shepherds come and hear me. Their sheep and horses will go home by themselves. Nobody—neither wolf, nor panther, nor thief—will carry off a single lamb while I sing about Manas." Keldybek's pupil and successor Balyk lived to be a hundred. The full text of *Manas*, kept at the Kirghiz Academy of Sciences, was first taken down in 1930 from Balyk's pupil and successor Sagymbai Orazbekov, who died in 1930.

A second variant of the epos was recorded as it was related by Sayakbai Karalayev, a *manaschi* of the Soviet generation who had an exceptional gift for narration and was a born actor. As a young man Sayakbai was a labourer on the farm of a Russian kulak and during the 1916 uprising fled to China together with his people. He returned to Kirghizia at the close of 1917, joined the Red Army and fought

against the bands led by General Dutov and the Cossack chief Annenkov. The celebrated *manaschi* Choyuk returned from China with one of the last groups of refugees at the very time that Sayakbai was demobilized. After hearing the *manaschi*, Sayakbai neglected everything—his work at the Revolutionary Committee and on his farm, saying that he wanted to listen to the *manaschi's* songs. He soon became a *manaschi* himself.

Legend takes Manas to many parts of the Tien Shans. In the Kochkor Valley there is a mausoleum which is reputed to have been built for forty of Manas's warriors. Each was famous in his own right. One was a talented military leader, another was noted for his eloquence, a third could unerringly guess the designs of the enemy, a fourth was a scout with such keen sight that he could see the tracks of a fox in the darkness, a fifth was a skilled blacksmith, a sixth was a fortune-teller, a seventh was unsurpassed as a singer who could sing for half a day about the furnishings of a yurta without repeating himself, an eighth was a physician, and so forth. In the Chon-Kemin Valley people will show you the "post" where Urbu's two black horses were tethered. In the Atbashi Valley there is the tall "kurgan of Koshoi," one of Manas's companions-in-arms. But the largest number of these "relics" are in the Talass Valley, where, according to legend, Manas had his camp.

Among them is a stone pillar to which Manas used to tether his Akkula, a horse of the "colour of snow bathed in sunlight," with a silky tail, indefatigable legs and, in its ears, a light that burned at night, illumining the road; a "black stone" (by the side of the road running to the Kenkol Ravine) of the size of a camel: we are told that Manas used it as a flint; a spring from which Manas used to drink water, and the spot where stood Manas's giant poplar in the shade of which twelve hundred sheep could be sheltered.

The Talass Valley itself is eulogized in the epos: "In Talass rice is now more plentiful than any other cereal, there is more silver than tin, and foxes outnumber the grey hares. It is a rich land. With their cloth pendants and broad waists the young matrons of Talass are comely. In pink dresses, with supple waists, the maids of Talass are fair. . ." This is how Kanykei, "clever Kanykei," describes the Talass Valley to her son Semeteh. According to legend, she built Manas's

gumbez (mausoleum) in the Talass Valley. This mausoleum is one of the most remarkable monuments of Kirghiz architecture.

A low hill called Manastyn-chokusu, covered with reddish veins of exposed quartz, multi-coloured lichens and pieces of quartz-mica slate that glitters with a silvery light, stands in the Kenkola Ravine, between the bluish slopes of two great chains of mountains rising to nearly five thousand metres and strewn with enormous crags. At the foot of this hill there is a building, which though half ruined has not lost its beauty. The epos claims that Manas was buried in this building.

When Kanykei decided to erect a mausoleum for Manas, the legend tells us, she fitted out a caravan of six hundred camels and sent it to find suitable clay. Goat and cow hair was added to the clay to make it stronger, and when the bricks were formed they were roasted in the fat of a thousand goats. In the mausoleum there are three fancifully shaped, weathered stones and the legend about them is that two are the feet of a camel and a baby camel that had belonged to Manas, and the third is the heart of his horse Akkula.

Archaeologists have debunked these legends. They deciphered the ancient inscriptions in the *gumbez* and found that the mausoleum had been erected in the 14th century over the grave of Kyanizyak-khatun, a daughter of the Jagatai emir Abuki, "the defender of brilliance and writing," and that it is in no way connected with Manas. The archaeologist M. E. Masson wrote that the many flaws in the bricks show that they had been fired by an inferior craftsman. In short, poetry was ousted by prose.

It is a curious fact that when the archaeologists read the name of Kyanizyak on the tomb, another legend was immediately born, saying that when the "clever Kanykei" built the *gumbez* she was afraid it might be defiled by Manas's enemies and so caused the name of a girl to be inscribed on the walls. The people had good grounds for inventing this legend. After all what is an unknown Jagatai princess in comparison with Manas, around whose image the Kirghiz people have collected all their reminiscences about their past?

Like the geologist, who lays bare ancient strata of rock or the archaeologist, who brings ancient cultural layers to light, the historian and the ethnographer will for a long time to come be finding

ever new goldmines of information about Kirghizia's past in *Manas*. I think that at this juncture it would be appropriate to stop for a moment and give a few facts from the ancient history of Kirghizia.

"In olden times," is a phrase with which many of the Kirghiz legends begin. Archaeologists working in the Tien Shans have discovered many relics of those "olden times": squatting-sites, caves and the flint implements of the Stone Age, burial mounds of the Bronze Age, and rock pictures made by the primitive hunters who lived in the Tien Shan Mountains in the first and second milleniums before our era.

In the twelfth century B.C. the Tien Shans were inhabited by the nomad Saki "archers," whose envoys said proudly to Alexander the Great: "Our poverty is faster than your hosts." It is startling to read in Herodotus that "the Saki, a Scythian tribe, wore stiff pointed hats made of close-woven felt," for such hats are worn by shepherds in the Tien Shans to this day.

The Saki learned to work iron and to tame horses for the saddle. The fame of the Saki cavalry spread far and wide, and even reached Greece. Rock drawings of horses have survived in Southern Kirghizia. In the second and first century B.C. the Chinese sent military expeditions to the Ferghana Valley to bring back these "celestial horses." But in those times the Tien Shans were ruled by the Usuns, tribes that were kin to the Saki.

Szu Ma-chiang, the ancient Chinese historian, describes the Usuns, who "did not till the soil or grow orchards, but with their herds roamed from place to place in search of grass and water." In 107 B.C., according to Shi Ma-tsiang, the Chinese emperor gave the princess Shi-hun in marriage to the Usun *hunmo* (prince). Pining for her distant homeland, the princess composed a song, which has come down as a striking illustration of the nomad life of the Usuns:

*They gave me away in marriage,
My kinsfolk, to a distant land,
To a foreign kingdom they sent me,
To the Usun king they gave my hand.
He dwells in a tent great and round
Covered with felt, not silk.*

*And no food other than meat I found
And no drink other than milk.
Whenever of the land of my birth I think
My heart is tortured with pain.
O that I could into a wild goose shrink
To return to my homeland again!*

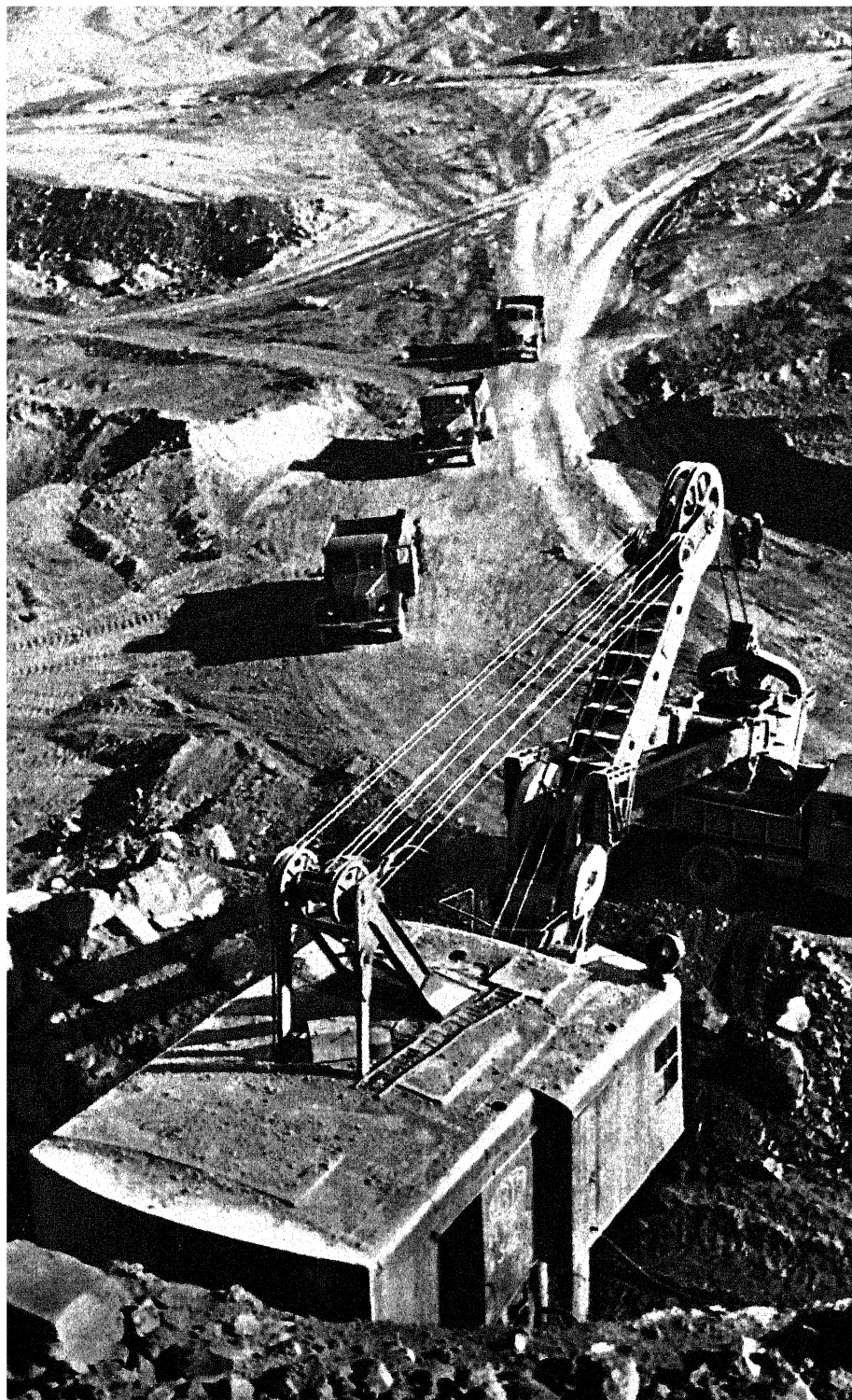
Thirty years later, when the princess Shi-hun was probably still alive, Chinese historians mentioned the first appearance of the Kirghizes in the Talass Valley of the Tien Shans. As a matter of fact, the first mention of the Kirghiz (ki-li-ki-tsi) is found still earlier, in the Chinese chronicles of the third century B.C. According to the historian Barthold, no other Central Asian people are mentioned so early in history as the Kirghizes. But in that distant age the Kirghiz tribes lived not in the Tien Shans but along the upper and middle reaches of the Yenisei.

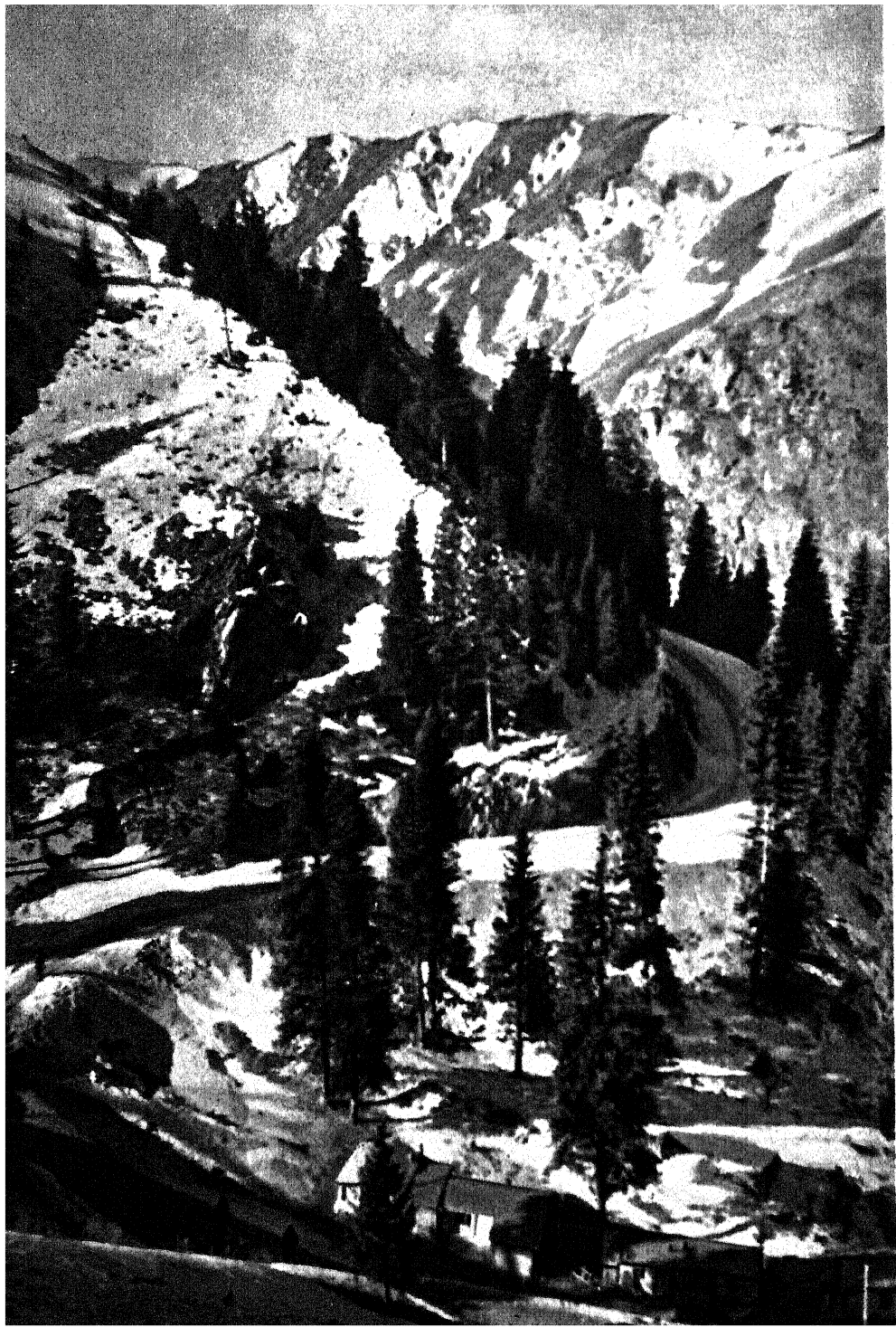
Many a human wave passed across the Tien Shans ("which was a splendid fortress and a convenient caravanserai," as the archaeologist A. N. Bernstam put it) before the Kirghizes established themselves there. According to Kirghiz historians, the period between the fifth and the eighth centuries A.D. was here marked by the "struggle between the pheasant and the mountain goat."

The mountain goat was the totem of the Turki tribes which formed a huge nomad kingdom known as the West-Turkic Kaganate. The numerous rough-hewn stone images with bowls in their hands that are to be found to this day deep in the mountains and the remarkably well-preserved Runic inscriptions that have been found on rocks in the Talass Valley are relics of this kingdom. The supreme kagan, the lord of the kingdom, had his seat in Suyab, a stronghold in the Chonkemin Valley of the Tien Shans. Envoys from all over the known world, from far-away Byzantium and from China, used to come to Suyab with caravans of gifts from kings and emperors.

In those days the Sogdians were the most enterprising merchants in Central Asia. Their symbol was the pheasant, the sacred bird of the Zoroastrians. They established military and trade posts and farming settlements in the Chu and Talass valleys. They dug irrigation canals and grew rice, vine and apricots. In the Chu Valley archaeol-

Kara-Su coal brought to the surface in the Tien Shan Mountains





The Maloye Kemm Ravine

ogists have excavated the ancient Sogdian town of Saryg and found inscriptions and iron, bronze, gold and silver artifacts in the shape of finely wrought pots, buckles and earrings. It is interesting to note that many of the Sogdian clay burial urns were made in the shape of a yurt. the nomad neighbours influenced the tastes of the Sogdians.

Turki-Karluk hordes swept into the Tien Shans in the 8th century. They settled in the Chu Valley and founded the big town of Balasagun, which in the tenth century became the capital of the feudal state of the Karakhanids, and later the centre of the vast Kara-Kitai empire. Balasagun was known throughout the East. This was where Khaji Yusuf of Balasagun wrote his *Knowledge of How to Be Happy*, a book which several centuries later was still being read in Egypt and on the Volga. Balasagun was famous for its Moslem and Buddhist temples, its network of water-pipes, and its great market. Half buried ruins and the eleventh-century brick Buran minaret near Tokmok are all that remains of this splendour. The death blow to the cultured agricultural centres of the Chu Valley was dealt by the Mongols.

*Twitching their pointed ears,
Our steeds paw the ground with fright.
The host of the enemy nears,
Coming from the East in its might.
The lake with stormy agony fills,
Boulders roll from the terrified hills.*

All Nature warns Manas of the approach of the enemy hordes. "What has Manas got to do with this?" you will ask. "And where did the Kirghiz live while these tempestuous events were taking place?" Until the mid-ninth century, the Kirghiz nomad tribes lived on the Yenisei and the Orkhon, warring at first with the Huns, then with the Jujans and after that with the Uigurs.

A Kirghiz kingdom, a political association of Kirghiz tribes embracing the whole of Mongolia and spreading from the Yenisei to the Central Tien Shans, arose in the middle of the 9th century. That was when the *Manas* epos began to take shape. No wonder that Manas's father lived in the Altai and that Manas himself was born there. The epos tells how Manas led his warriors across the Irtysh and the Or-

khon. On the Irtysh there is a ravine which still bears the name of Manas as a reminder of the past.

The Kirghiz kingdom was short-lived. It fell apart in the mid-tenth century under the attacks of the Kara-Kitais. Some of the Kirghiz tribes remained in Siberia, but most of them found a refuge in the highland valleys of the Tien Shans, which had been part of their domain previously. Though divided territorially, these two parts of the Kirghiz people maintained a lively intercourse for a long time. When the Mongol invasion began, the Yenisei Kirghizes put up such a desperate resistance that a special military expedition headed by Juchikhhan was sent out against them in 1218. They were defeated and many of them sought refuge in the Tien Shan valleys, which were natural fortresses and out of the reach of the Mongols. Some, the forefathers of the present-day Khakassians, went deep into the Siberian forests. Since then the Tien Shans have been the main rallying point of the Kirghiz tribes.

The migration of the Kirghizes from the Yenisei to the Tien Shans and many other events of subsequent times are poetically mirrored in *Manas*.

For many centuries the Kirghiz people have drawn inspiration from the heroic deeds of Manas. His name lives to this day. One of the cinemas in the town of Talass is called the "Manas." An oil tanker christened "Manas" sails in Lake Issyk-Kul. *Manas the Generous* is the title of a popular narrative for schoolchildren written by S. Lipkin, who translated the Kirghiz epos. A sheet of paper with "The Vow of Manas" neatly written out on it was found in the pocket of the national hero Cholponbai Tuleberdiyev.

Cholponbai Tuleberdiyev, member of the Thälmann Collective Farm, Talass Region, won nation-wide fame in the autumn of 1942 in an action against the enemy on the Don, near Voronezh. The Nazis had a pill-box on a chalk hill which covered every inch of the river crossing. The pill-box had to be destroyed at all cost. The company commander, the platoon commander and Tuleberdiyev, who was a private, swam out from the rushes towards the hill from three directions. Bullets churned the water now to the right, now to the left, now behind them.

Cholponbai reached the bank first, throwing a hand-grenade at the pill-box, then another, before scrambling up the steep side of the hill. The Nazis trained their guns on him and a burst of machine-gun fire caught Cholponbai. His arms fell helplessly to his sides, releasing the submachine-gun. But the soldier kept moving. Mustering every ounce of his remaining strength he reached the gun-port and closed it with his broad chest, stifling the enemy machine-guns. The company commander ran up and with a burst from his submachine-gun destroyed the Nazis in the pill-box. The way cleared, the company quickly forded the river.

Grim-faced soldiers, their steel helmets in their hands, stood round the grave of Cholponbai Tuleberdiyev. The title of Hero of the Soviet Union was conferred upon him posthumously and he was made an honorary private of his regiment. To this day at the morning and evening parades, when the company commander calls the roll, the right-flank man answers: "Private Cholponbai Tuleberdiyev died the death of a hero at the taking of a pill-box on the right bank of the Don River!"

4. VALLEY OF GOLDEN RAMS

We are in the town of Talass, sitting in the garden of a *chaikhana*. A gentle breeze is blowing from the mountains. A truck passes by and when the sound of the engine dies down we hear the babble of a nearby stream. Voices reach us across the roofs of the houses from the direction of the river, from a stadium on an island surrounded by riverside thickets. Amid the verdure of gardens there are several small factories. A rider in a wide-brimmed felt hat goes past the *chaikhana*, and in the distance tower the mountains in their mantles of snow.

At the dawn of human history, the ancient Greeks composed legends about great wealth hidden at the edge of the world. For them this edge was a fabulous land called Colchis, where a fire-eyed dragon guarded the Golden Fleece. To steal it the Argonauts had to resort to cunning. For all that, the legend was an optimistic one—the Greeks believed in the strength of man. But in Kirghizia there is a proverb about wealth that is really pessimistic. "To become

wealthy," it says, "is as hard as to dig a well with a needle." The Kirghiz composed their own tale about the Golden Fleece two thousand years after the Greeks. A new breed of fine-fleeced sheep has been evolved and the collective farmers call them *altyn-kochkor* which means golden rams, and these golden rams are bred here, in the Talass Valley. Mention these rams in the *chaikhana* and you will be told an interesting thing or two about them.

Sheep, not the *altyn-kochkor* breed, but the common fat-rumped sheep, were the principal wealth of the Tien Shan nomads. A year-old ram was the standard of value for clothes and harness and for the *kalym* (bride-money). When anybody slaughtered a sheep, clan custom obliged him to invite all his kinsmen to the feast. The sheep's carcass was cut into eleven parts: the head with one side went to the *manap*, the rump with the other side were taken by the *bais*, and so forth down to the neck which was given to the shepherds, and the entrails that were received by the women: the *manaps* and *bais* had flocks numbering thousands of sheep, the poor man owned one or two animals, and the labourer worked for the right to milk two or three of his master's sheep.

In the Tien Shans not only were sheep a standard of value and given as presents, but were also a means of punishing people: the *manaps* used to have flocks of sheep driven over a man lying face up on the ground. Many legends and superstitions are associated with sheep. "If you shout loud enough even a stubborn sheep will allow itself to be tied," "Cheap mutton has little fat" are just two of the many proverbs dealing with sheep.

"The Spanish sheep for wool, the Russian for the skin and the Kirghiz for the fat," livestock experts used to say. The Kirghiz sheep had a fat rump, a reserve of several kilograms of fat which it drew upon when there was a dearth of food. But wool. . . While a good Merino ram annually yields enough wool for twenty metres of fine cloth, a rough-haired ram hardly gives enough for one metre of coarse material. A situation such as this could not be tolerated in Kirghizia or in Russia.

The well-known livestock expert Professor P. N. Kuleshov, who raised the Novokavkazsky breed of fine-fleeced sheep back in 1910, wrote in 1922: "Calculated per head of population we have wool

enough to mend one torn mitten. As for putting a patch on our trousers, that is out of the question" The task set sheep-breeders throughout the Soviet Union was to cross rough-haired sheep with fine-fleeced rams and evolve new breeds with fine fleeces. In Kirghizia sheep-breeders began to tackle this task in earnest in the early thirties. This was demanded by the country's textile industry and by the Kirghiz collective farmers themselves; they were paid eight times more for the wool of a fine-fleeced sheep than that of a rough-haired animal. In the Tien Shans cross-breeding meant higher incomes for the collective farmers and, at the same time, of a further consolidation of the collective-farm system. That was why the *bais* did their utmost to disrupt this undertaking.

The rump, the common fat rump of the Kirghiz sheep, was made the target of a vicious campaign launched by the *bais*. Even the sheepdog was brought in to support their claim that "a Kirghiz hated the sight of a sheep that had a tail and no rump." The Kirghiz dogs were indeed unaccustomed to the sight of a ram with a tail. They had been taught to drive animals with tails—horses and cows—away from the flocks. When the first lot of Novokavkazsky merinos were brought to Kirghizia, many of them had their tails bitten off by dogs. This fact was seized upon by the *bais* as a clinching argument in their counter-revolutionary propaganda. But the dogs disappointed the hope of the *bais*. They quickly grew accustomed to sheep with tails. The first *altyn-kochkors* thus secured a place for themselves in the Tien Shan pastures.

In the thirties, the poor people of yesterday used the word *altyn-kochkor* to sum up the results of major events in their lives. At first the Novokavkazsky rams were called *altyn-kochkors*, then the Wurtembergers, the Prekos sheep and the rambouilletized Siberian merinos, which were brought to the Tien Shans to be crossed with the native Kirghiz sheep, and finally the name was given to a new breed of Kirghiz fine-fleeced mountain sheep. The legend of the Golden Fleece thus received its modern consummation.

The new Kirghiz fine-fleeced mountain sheep were evolved under the guidance of Corresponding Member of the Kirghiz Academy of Sciences M. K. Lushchikhin at the Juan-Tübeh State Sheep Farm.

whose main office is at Groznoye, a village in the Talass Valley. Let us go there.

To reach it we have to cross the whole of the Talass Valley with its villages of whitewashed clay houses, apple and cherry orchards, apiaries, vegetable gardens and fields of sharp-leaved sunflowers, past maize fields with a straw scarecrow or a dead eagle nailed to a post, its wings flapping in the wind. The meanders of the Talass River weave a pattern amid the fields. White holly-hocks bloom along the roadsides. Piebald cows follow us with their toneless mooing. These cows are particularly numerous near the village of Leninpol.

German settlers came to this area in the eighteen eighties, bringing Holland cows to the Tien Shans. On the way to Johansdorf, look in at the Wilhelm Pieck Collective Farm or into any of the other settlements founded by Germans: they are the home of a new breed of cattle, the Aulheata, or the Talass black and white. This breed was evolved in Soviet times, by crossing Holland cows with the local Kirghiz cattle. At the village of Kirovskoye we turn off the highway and finally arrive at Groznoye. The Kalinin Collective Farm at that village is famous for its tobacco, selling more than 120 million leaves to the state every year. But Groznoye is noted mainly as the site of the Juan-Tübeh State Farm, which is the leading sheep farm in Kirghizia.

Let us visit some of the divisions and field camps of this state farm which extend in a semi-circle below Groznoye, for instance, the field camp of Tülebek Dosbergenov, the head shepherd of the brood flock. Dosbergenov has for many years been shearing from five to six kilograms of wool per sheep.

A flock moves among the hills, the sheep hiding their heads in the woolly backs of the ones in front. Gadflies and flies hover above the flock, starlings hop about on the backs of the sheep, and this river of wool and mutton snuffles, snorts and bleats. The sheep press round a horse and it seems as if the rider is swimming in a rippling stream. The rider, a deeply-tanned, thickset man, wears a black little Astrakhan cap, high-boots and khaki breeches. This is our first meeting with Tülebek Dosbergenov.

He dismounts and exchanges handshakes with us. Then he shows us his sheep. From head to foot they are covered with dirty-grey wool.

But the shepherd draws it apart with his hands, showing white "down," which on some of the sheep is creamy in colour. Speaking of the wool of their new sheep, the Kirghiz shepherds say: "It is whiter than a cloud, softer than the smoke of the hearth, and as strong as the string of a *komuz*." This is no exaggeration. Take a strand of this wool at both ends, stretch it, ask somebody to hit it with his finger, and bring it close to your ear—you will hear it sing, twang like a plucked string. The higher the note the stronger the wool is said to be. Only three hundred grams of this fine, pure wool is needed for a metre of fine cloth. This means that each of the sheep at the Juan-Tubeh State Farm clothes at least four people. Dosbergenov's flock alone annually clothes more than two and a half thousand people.

The wool of the Juan-Tubeh sheep is pliant and elastic, delicate and soft. It is used for the best kinds of worsted fabrics. The animal that yields this wool is at the same time as good a producer of mutton and fat as the fat-rumped sheep. The only difference is that it accumulates the fat not in its rump but inside its body. The workers of the Juan-Tubeh State Farm remember how the shepherds laughed when they were first told this.

From the old Kirghiz sheep, the new Kirghiz fine-fleeced mountain breed has inherited endurance and an ability to adapt itself to the harsh conditions obtaining in the Tien Shan pastures. Every year the Talass shepherds drive their sheep to the *djailohs*, and some of the flocks are taken as far as the Chatkal Valley, the westernmost of the valleys in the Tien Shan Mountains. The sheep travel a long distance across mountain-sides, rock, steep slopes and passes piled with snow. The breeders had to give this a thought as well.

Take, for example, the fact that the first of the fine-fleeced, half-breeds inherited from their imported sires thick wool on their feet and around their eyes. During frosts in the mountains, the wool around the eyes grew stiff with ice, blinding the sheep. Then take the wool around the feet. When icicles formed on it the sheep were unable to move. This was a disadvantage in Kirghizia, where sheep are compelled to break down the snow which is sometimes eighty centimetres deep. The breeders took all this into account and evolved

a new sheep whose legs were free of wool "up to the elbow." So was the head—the fleece began behind the ears.

At Dosbergenov's field camp there are a "maternity home," a dispensary and a concrete-paved bath for sheep. The sheep are sheared with the aid of electricity

As we leave the Talass Valley we cast a last glance at the distant pastures. We have seen so many sheep that the cumuli above the valley look like so many heaps of white combed wool. Before us lies a long journey via the Kazakh town of Jambul, then by rail to Frunze, and again by car to Rybachye and farther, from the Issyk-Kul Valley to the South, to Naryn, the heart of the Tien Shans.

5. HEART OF THE TIEN SHANS

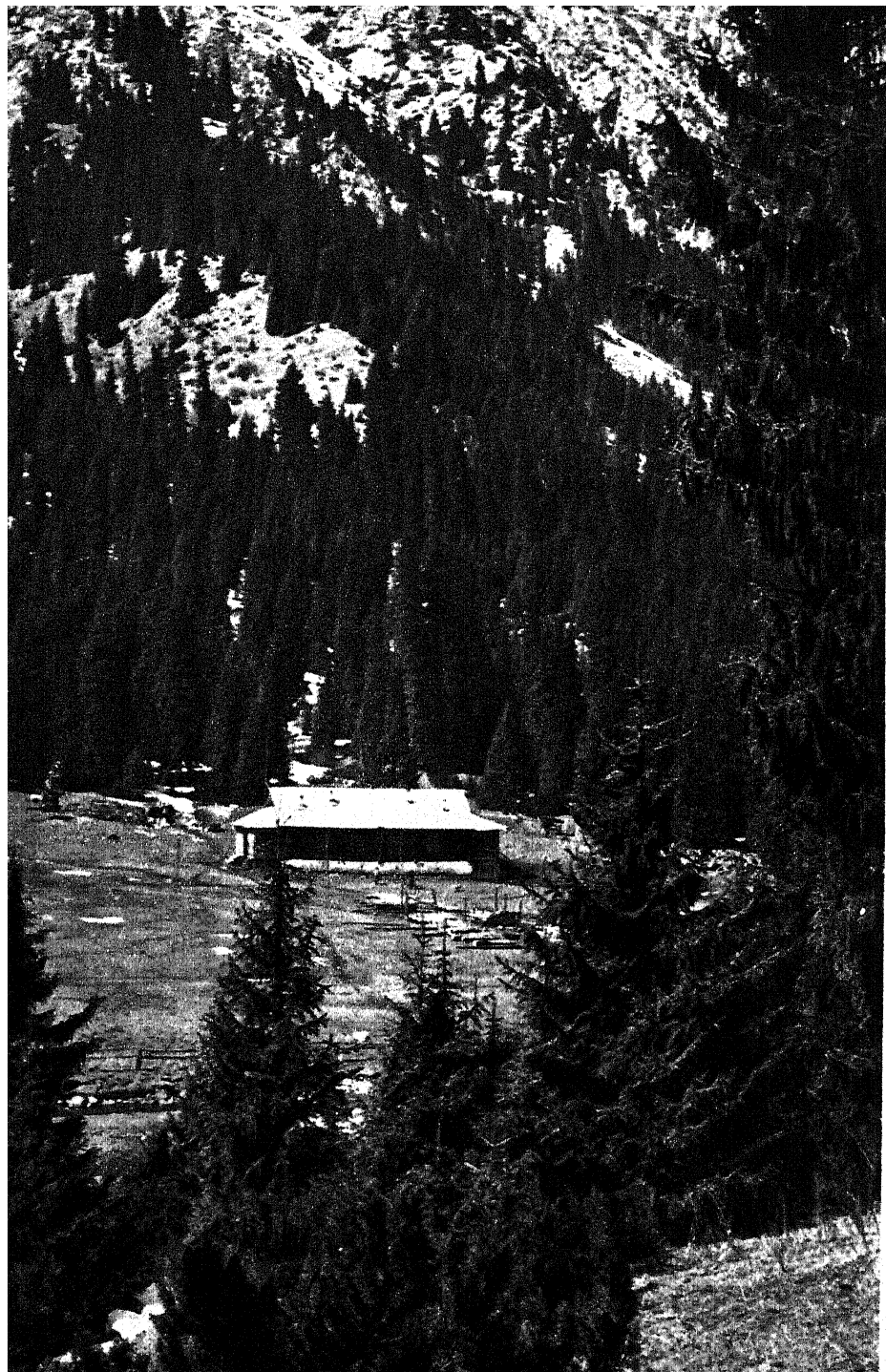
Kirghiz tribes have lived in the fastness of the Tien Shan Valley for ages. They warred among themselves, quarrelled, but drank water from the same river, the Naryn, which has its sources at the frontier with China, in the ice of tall Khan Tengri. Collecting the waters of mountain streams and rivers, the Naryn breaks through the ice-covered ranges from one valley into another, crosses almost the whole of the Tien Shan system and finally escapes into the Ferghana Valley where it joins the Kara-Darya to form the great Central Asian river that the Ancient Greeks called the Jaxortes, the Chinese the Yang-Shui, the Arabs the Seikhun, and we the Syr-Darya.

It is not possible to follow the channel everywhere from valley to valley because in places the gorges are nothing but sheer walls and the waters batter the banks with ruinous force. The sound you hear in the gorges is not a gentle murmur or a plaint, but the roar of a wild beast that drowns human voices. Clouds of spray rise above the boulders and the waters drag the stones along the river bed. But there are places where the Naryn flows in an alluvial plain and its waters move so slowly that they reflect the banks.

The water changes its colour along the different sections of the route. In the mountains it is blue and limpid, near the town of Naryn it is a dirty-grey, lower down where it is joined by the Atbashi it is brick-red, at Kavak-toh it is two-coloured, blue and brown (the blue

Hunter with a golden eagle





Tien Shan Physical and Geographical Centre of the Academy of Sciences of Kirghizia

waters of the Kokomerén flow a long way in the channel before mixing with the brown waters of the Naryn), and in a narrow ravine some twenty kilometres below the town of Naryn it is black with a white foam on it.

When you see the Tien Shans for the first time you find the picture exceedingly dismal. The mountains are bare, devoid of trees and furrowed up with stone wrinkles. Below the eternal snow caps are the crags, whole ridges of boulders, and pastures strewn with rocks, and then ash-grey boulder-stones again. As the majesty of the rocks gradually ceases to dominate the eye, you begin to take delight in their shapes and endless variety of colour. The beauty of the mountains begins to captivate you, until you find that you can no longer tear your eyes away from the boulders, the snow-capped peaks and the streams that seem to be filled with gems.

The Tien Shans tower in the centre of the Asian continent almost midway between the Bay of Bengal and the mouth of the Ob, between the Caspian and the Yellow seas. This results in a dry, continental climate. No sooner does the sun hide behind the mountain range than the temperature drops sharply. In the day-time, the sun scorches the skin even through a shirt, while in the shade you feel cold. There is a great difference between the summer and winter temperatures. In summer the days are sweltering hot even high up in the mountains, and in winter the mountains and the valleys change into a kingdom of icy winds; the swift current is all that prevents the rivers from freezing. Masses of tiny crystals of ice make the water turbid, but the mad current does not let these crystals freeze together.

The mountain valleys lying at an elevation ranging from fifteen hundred to two thousand metres have been the home of the Kirghiz people for many centuries. The biggest of these—the Naryn, Atbashi, Kochkor, Chon-Kemin, Jungal, Toguz-Torou, Ketmen-Tübeh, Talass and Chatkal valleys—were each a kind of big independent principality. Other peoples called the Kirghizes Wild-Stone Kirghizes or Kara-Kirghizes (Black Kirghizes), thus emphasizing the ignorance and lack of culture of the people dwelling in the wild mountains.

In the middle of each valley, near a swift river with waters swirling from one bend to another and filling the air with the rattle of stones, there usually was the big, white ornamented yurta of a *manap*. Mat-

ting embroidered with coloured wool hung on the yurta's wooden framework inside, and in addition to the customary pile of blankets and pillows, it sometimes contained booty from a raid: a black-lacquered, Chinese curved armchair with the figures of dragons or an ordinary (extraordinary for the Tien Shans) double-bed that had obviously come from the home of a Russian merchant.

Close to the yurta of the feudal prince stood his winter clay house, the yurtas of his wives and the yurtas of the menials. Some of the latter were so poor that instead of a yurta they had an *alachik*: four posts covered with a piece of felt. The families of the labourers made and embroidered the felt for their *manap*, prepared the kourmiss for his table, smoked horseflesh sausages over the fire-places, made cheese and sweet curds from sheep's milk, cooked mutton in soot-covered pots, and distilled liquor from koumiss, sometimes adding camel's milk to make it stronger.

Arguing that the peoples of the Tien Shans had since ancient times been living in smoky yurtas and that notwithstanding the "half century of Russian rule" the yurta and the nomad way of life still reigned supreme in these wild mountains, the tsarist officials wrote shortly before the Revolution: "Science will not conquer nature in the Tien Shans, and that nature will be the nomads' defence against the advance of civilization, and even in the distant future they will remain living relics of primitive man."

There is an old Kirghiz proverb, which says: "The wise man looks at the fire, the fool looks in the pot." These officials "looked in the pot." The more far-sighted of them, those few who saw the coming Revolution and in their fright tried to stave it off with gallows and prisons, hoping in that way to save their privileges, their estates and factories—even they never imagined that the Russian Revolution could be bigger than the bourgeois revolution in France in the eighteenth century, that it would open up a new era in the history of the human race.

Julius Fučík came to Kirghizia in 1930, just thirteen years after the Revolution. A little-known Czech journalist at the time, he wandered about the streets of Frunze, rode out to the pastures in the mountains, keenly noting the changes that had taken place in the life of the Kirghizes. Although in those days vestiges of the departing

nomad way of life were still in evidence everywhere, Fučík saw the birth of a new, socialist life in the nomad tent, to say nothing of the Kirghiz capital, and realized the epoch-making significance of what he saw. He was one of those who could look "at the fire," at the root of vital phenomena. Even though he was from a cultured country himself he discerned the future in what he saw in Kirghizia.

In a foreword to a book of articles about the Soviet Union, which he called *A Land Where Our Tomorrow Is Already Yesterday*, he wrote: "I remember sitting with the hospitable Asherbek at the fireplace in his yurta on a slope of the Alexandrov Mountains. With his legs crossed, he spoke of tsarism and of how the people had lived in want, and I, in my turn, told him of our life in a far-away Central European country and how burdensome life was when there was no freedom. He listened attentively and what I spoke about seemed to me to be things out of the history of a remote age."

Before leaving Frunze, he sent a letter to the builders of socialist Kirghizia in which he wrote: "We had set out for a country which the bourgeois story-tellers described as savage and exotic. But we found ourselves in a land where construction is proceeding at a much faster pace than in the 'most civilized' countries of the capitalist West . . . What we have received from you we shall take to the proletariat of the whole of Western Europe."

I vividly remember the time when the first postcards with a portrait of Lenin appeared in the smoky yurtas of the shepherds. The first book, the first newspaper and the first mirror which was stood up against a pile of blankets, were all events in the life of the Kirghiz people. China dishes, cups, jugs and plates appeared on the table-cloths.

But the new did not always triumph at once. When the first tractor arrived the nomads tied a talisman, the wing of an eagle-owl, to it to protect it from the evil jinn. Beneath a fowling-piece and a pair of binoculars hanging on the wooden frame of a yurta, women hid a new-born camel from the evil eye by wrapping it with felt. And yet, in spite of that, life changed perceptibly in the Tien Shan valleys, the changes becoming more marked as time went on.

In each of the former winter camps, the seats of the "independent principalities," the *manap's* yurta was superseded by covered stables

and sheds in which the livestock were kept in winter. Near them, amid the riverside shrubbery, a veterinary centre, a small cheese-making factory, a grass and forage centre, a shop, a school and a hospital appeared one after the other. Machine and tractor stations were set up in the centre of the Tien Shans and the first fields were ploughed up and sown. And, finally, in 1936-37, when the collective farms grew strong enough to stand on their own feet, the Kirghiz farmers began to move their goods and chattels from the yurtas to houses, where the tables and beds, the window panes and the porches were full of the charm of novelty for the nomads of yesterday.

The parting with the yurta was an epoch-making event in the history of the Kirghiz people. Let us go into a yurta and look it over. That is not hard to do because in addition to the shepherds in the *djaulohs* there are old people in the valleys who do not wish to part with the hard but dear way of life of their forefathers, for after all the yurta had for many centuries been associated with cosiness, warmth and the family.

"Your home is where you have lit a fire, your pasture where you have tethered your horse," declared a Kirghiz saying with a note of pride. The building of a new yurta was celebrated with festivities during which a ram's head was tossed up with the words. "May smoke always rise from this yurta! May the fire never go out in it!" Every traveller who has been to the Tien Shans remembers the yurtas of the hospitable shepherds, yurtas smelling of smoke and of koumiss. In the middle there is the fire-place. And in the evenings the steam rising from the pot hanging over the fire blots out the stars trying to peep into the smoke-hole. And, of course, he remembers the shaft of moonlight coming through the smoke-hole, and the shaggy Kirghiz sheepdog thrusting its head inside with the flickering flames in the fire-place reflected in the cold pupils of its eyes.

But in winter? In bad weather? In a snow-storm? Aaly Tokombayev has a poem called *The Yurta*. A group of Kirghizes are speaking of the merits of their felt dwelling and the author writes: "And I said to myself: enough! To see how good the yurta is, a snow-storm would be opportune." And (in the mountains the weather is as capricious as a child) the weather suddenly changed for the worse, a wind

rose tearing at the yurta and pelting it with hail and then snow; drop by drop the water began to trickle in, seeping through the holes:

*How can they breathe in smoke so thick?
How keep together body and soul?
The young housewife takes a stick
To open up the chimney hole.
In vain—the wind drives back the smoke,
Tears blanket up our smarting eyes.
And what a cough! More troubles here
Than anyone can realize.
The wind, run amuck, tears the felt
With all its ever-growing strength.
Like the eagle's wings, the tatters flap
As if to fly away at length.
To keep the yurta from crashing down
We go and prop it up with poles.
The guests extend their freezing hands
To warm them at the hearth, poor souls.*

The storm passed and the guests, chilled to the marrow, said:

*We dreamed of visiting the home of some Kirghiz,
Well, now we've been there and we've found out what it is.
There's not a penny-worth of warmth in all the place,
And what a wonder are the people who can face
So many winters in this hut, both young and old,
Without the slightest fear of catching cold....*

The gentle smile illumining these lines is that of a man who, with his people, has broken away from life in a yurta. It takes us back to the nineteen thirties when the Kirghizes began to move from their yurtas into new houses. Hardly a day passed without a house-warming party being held. The host would meet the guests at the threshold and lead them into the new house without asking what clan and tribe they belonged to: the internecine strife had by then become history and the horses and sheep were free of clan brands. The host would place refreshments in front of his guests and with dignity ask them

about this and that. And only after the refreshments had loosened tongues would the host sigh and say with a fleeting smile:

"A pity there's no fire-place in the middle of the room. Had there been one I would have thrown a handful of dry wormwood into it for you. Yes, that would have been a bouquet!"

The visitors too would recall the pleasant smell of smouldering wormwood, a smell familiar to every Kirghiz, and smile. But the next moment this memory would vanish like smoke, without leaving a trace and, perhaps, taking away with it the last reminder of life in a yurt, of the life of a nomad.

Life in the Tien Shan valleys has now changed beyond recognition. In 1953, when I last visited Naryn, the chief town in Tien Shan Region, I saw great throngs of people moving in the direction of the town in trucks, on bicycles and on horses. They were headed for the valley on the outskirts of Naryn where a company from the Kirghiz Opera Theatre in Frunze, which had come by plane, was scheduled to perform the opera *Aichurek*. People were streaming into the valley from the town as well.

After this impressive scene in which more than five thousand people attended an opera, the town of Naryn seemed small to me. Only some of the flat-roofed adobe houses were two storeys high. The gardens were tiny, and then not all the houses had a garden. Even Naryn's industrial enterprises—the saw-mill and the brickworks, the meat-packing plant, the tannery and the sewing and footwear factories, and the confectionery—did not make the town big. The reason for this is perhaps that the town is situated in a broad valley amidst the mountains, hills and rocks. Although there are sizable fields and vegetable gardens outside the town, they look small because you can see them running into ravines: they do not give you a feeling of space.

And yet a person who has been to Naryn before will be delighted by the numerous features of a new life. The main thoroughfare bustles with activity: collective-farm trucks with milk, vegetables and wool, three-ton Kitaitorg (China Export) trucks with building timber, glass, concentrates, oil cake for the livestock, manufactured goods or medicines, pickups with fresh newspapers, magazines, films and mail, and heavy trucks heading south from Lake Issyk-Kul and crossing the entire Tien Shan range on their way to Western China. On this

thoroughfare you will also see people on bicycles, horses or on foot coming to the town from nearby villages, and a tractor or a combine crossing from one field to another.

Think of it, from one field to another . . . In 1930 there was not a single field! A few puny blades of grass was all the vegetation on the hills and when a wind blew the hills turned oddly white. Kirghiz scientists have since resolved the problem of highland farming. In the Tien Shans wheat has "climbed mountains," rising from the Chu and Issyk-Kul valleys to nearly three thousand metres above sea-level, and in some places even higher than that, filling all the mountain valleys in the republic with grain.

The Tien Shan Mountains have long since become a living and ever-changing chart of the successes that have been scored by Soviet plant-breeders. Wheat, potatoes, cabbage, beet, tomatoes and carrots are moving higher a few score metres every year or two. Up, up, always up—such is the road of achievement of the Kirghiz plant-breeders.

Go to the mountain village of Kulanak. Mountain village . . . The word loses all its former meaning when you see how big Kulanak has become, with vegetable gardens and fields spreading around it: many of the fields are blue with medicinal poppy. Poppies growing in the heart of the Tien Shans! Kulanak is still more famous for its orchards: Soviet plant-breeders brought to the Tien Shans apple- and plum-trees, the Siberian cherry-tree and the Ussuri pear-tree, watermelons, raspberry canes, currant shrubs and even the vine. For several years now the Kulanak fruit-tree nursery has been supplying saplings to all the valleys in the Tien Shans. Like wheat, fruit have ascended the mountains of Kirghizia.

Visiting the Kulanak secondary school, I recalled a story told me by Isa Akhunbayev, President of the Kirghiz Academy of Sciences

"When my father was a young man, one of his neighbours, the rich *bai* Kydyr, went to the borders of Uzbekistan on business. There he saw cotton, bought two pounds of raw fibre and brought it home. His wife wrapped her baby son in the soft white down. Word about the present the *bai* had made his wife spread far and wide.

"People came to Kydyr and asked:

"What is this strange thing?"

“‘I shot down a piece of cloud,’ the cunning *bai* replied, ‘and when it fell I picked it up and brought it home.’

“The people believed him and the greedy *bai* made them pay to see the wonder.”

At that time the valleys were cut off from each other as though they were situated on different planets. The Revolution united the scattered Kirghiz tribes into one people. The Soviet school did a great deal towards drawing them closer together and opening their eyes to the world.

In the remote mountain districts the first schools began to appear in the thirties. In those days the pupils used to bring with them, in addition to ink, pieces of sheep fat which were put in the lampions. At one of these first Kirghiz schools the teacher told his pupils after two years: “I have taught you all I know. There is nothing else I can tell you.” In those days not every teacher was able to point out Africa on the map. What a long time ago that was! Kirghizia today has an army of highly-trained teachers.

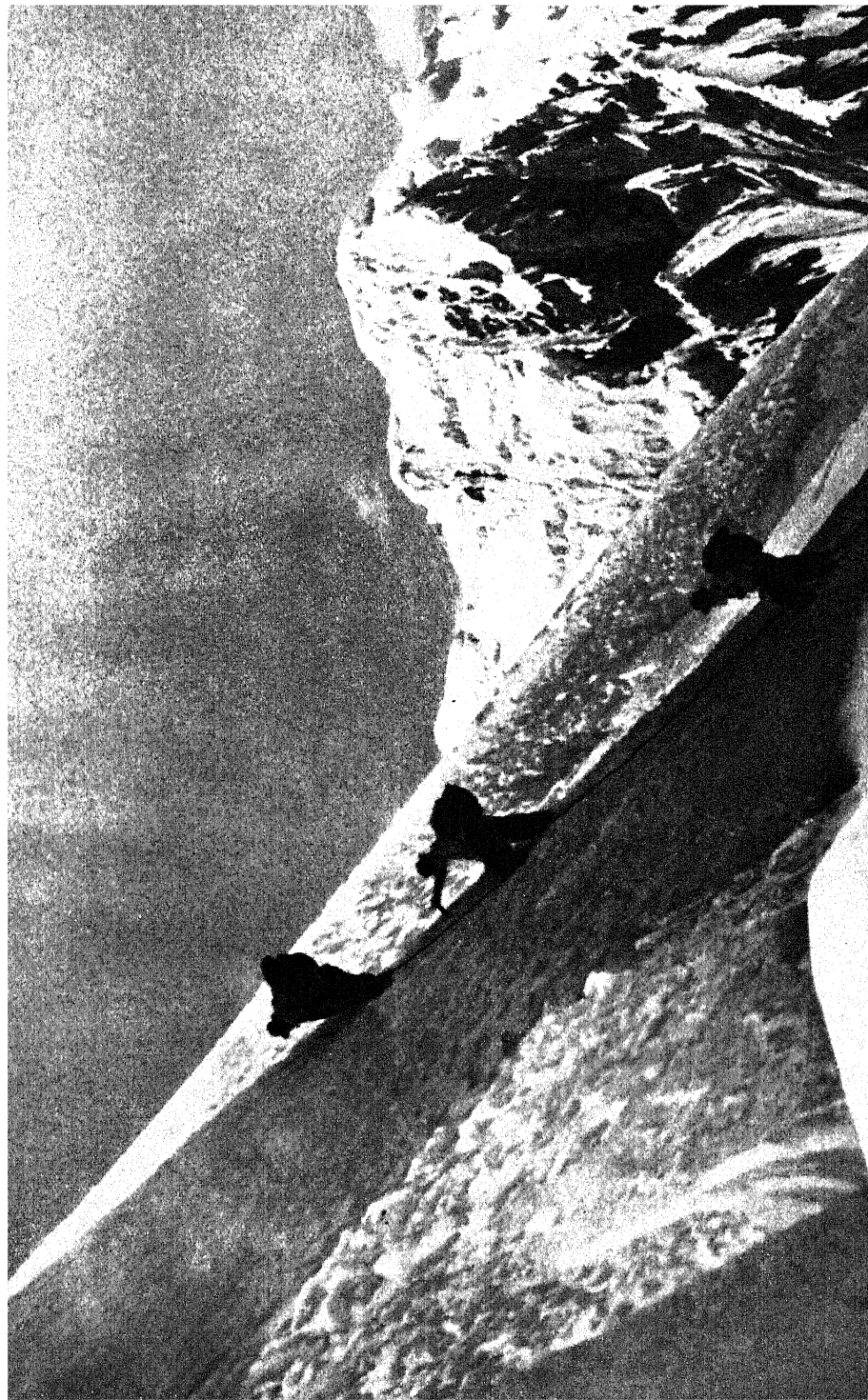
Let us linger for a moment near the school. No, not to go into the bright classrooms and stay for a lesson in trigonometry—that would hardly interest you, because the curriculum is the same as at any school in Moscow, the Urals or the Ukraine—but to see something that can be seen only in the Tien Shans.

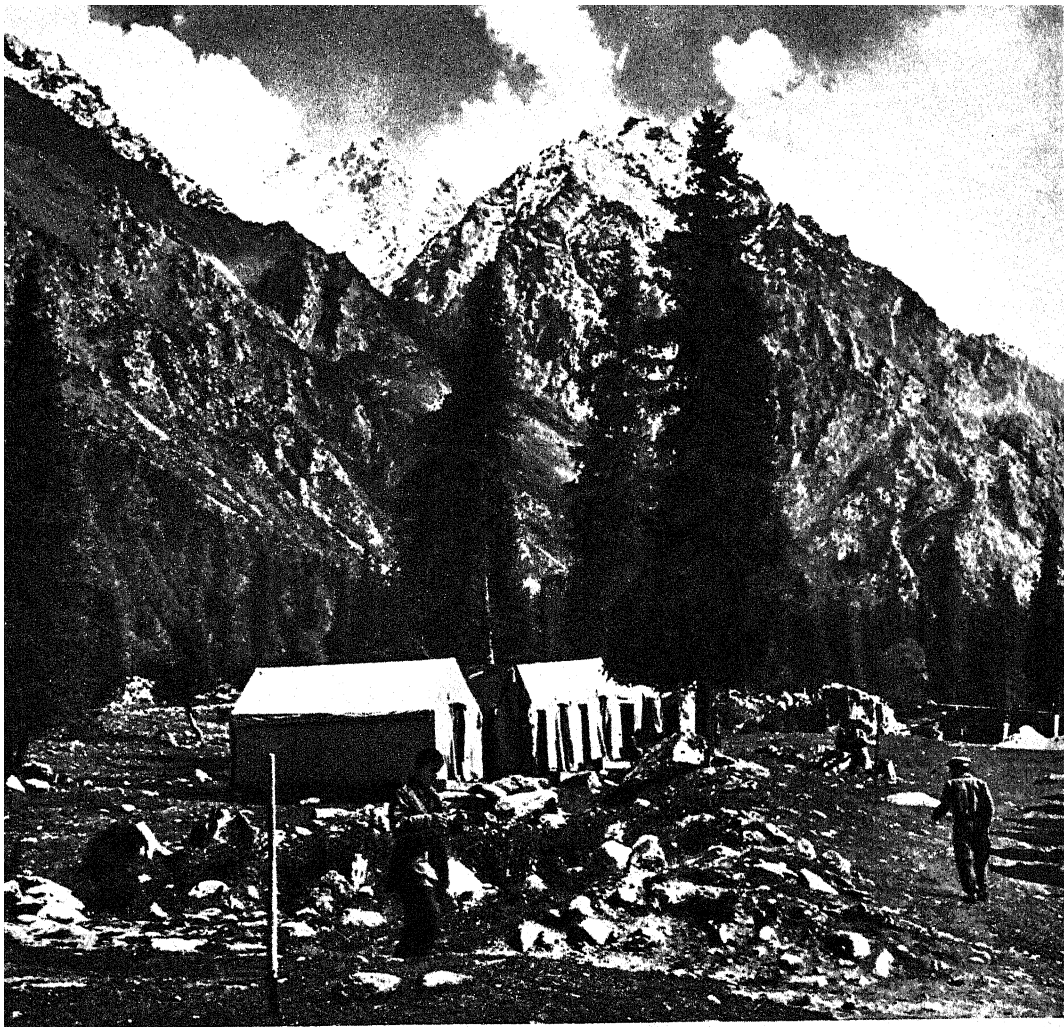
The doors of the class-rooms are thrown wide open as the bell for the break rings and the children pour out into the playground. The same bell announces the end of lessons in the first class and several eight-year-old boys and girls, who had come to school from the pastures, go up to their tethered horses, tie their schoolbags to the saddles, lead the horses to some big boulders and from these easily hop into the saddle and gallop away.

Pupils of the senior classes fill the volleyball court. And near by some of the boys play a Kirghiz game called *it-tartysh*: two boys stood on all fours back to back, and round the neck of each is tied a rope with the end passed between the legs; the purpose of the game is to pull the rope until one of the players topples over.

One of the songs I took down in my notebook in Kulanak has the following line: “Your beauty is as clear as paper”: that image has been introduced by the school. The school has added to the Kirghiz

Mountain climbers in the Central Tien Shans





The Ala-Arga Mountain-Climbers' Camp

language a countless number of concepts and words. And the world itself became bigger for the Kirghiz people. A trip to Moscow or abroad by train or aircraft has become part of life deep in the Tien Shans. The people of the Tien Shans have changed the bridle for the steering wheel of the tractor or the harvester combine, for the stethoscope of the doctor. Every profession is now open to the Kirghizes. And their plans reach far into the future. The problem of the Great Naryn is discussed in almost every home. Kirghiz scientists have calculated that the Naryn has approximately the same potential power as the Volga.

Stop your car near the Naryn and you will hear the boom of the stones turned by the water and, if the season happens to be autumn or winter, you will hear the wailing voice of the ice as it tries to bind the banks of the turbulent river, the piping swish of the small waterfalls, the plash of the foam and the rumble of the wash in the little bay at your feet, and, blending, these sounds are echoed somewhere high up in the mountains. In a few years the river will be silenced. The dams of twenty big power stations, which will generate more than four million kilowatts of electricity, will arise on its banks. This will make for a still more radical change in the life of the mountain valleys: the calm blue waters of the Naryn Storage Lake will reflect the buildings of new factories and mines. The first hydropower station of the future Naryn cascade, the Uch-Kurgan, is already under construction in the lower reaches of the river. The building of the Great Naryn has been started.

This brings to mind the words of Madan Mohanlal Atal, the well-known Indian public figure. "Sometimes, when I give free reign to my fantasy, I picture scientists developing television to such an extent that in their modest dwellings ordinary people throughout the world will be able to see for themselves what the Soviet Union is doing for its citizens. They would then learn the truth, for he who sees for himself begins to believe. The blinkers that have been put on their eyes would fall off. The web of anti-Soviet falsehood and slander that is spread by evil-minded people, would be swept away."

Yes, if from their modest dwellings ordinary people throughout the world could see. . . . But here we may say that the dream of Madan

Mohanlal Atal is already approaching realization. Radio-relaying lines are to be laid over thousands of kilometres, with the lion's share falling to Kirghizia. So far this invention has proved most effective in the mountains: the masts of one station must "see" the masts of another, no matter what the distance between them is. Where can better conditions be found for this than in republics cut up by chains of mountains.

Re-broadcasting stations are already operating on the summits of some of the Tien Shan ranges and within the next two or three years radio-relay lines will link up all the mountain valleys of Kirghizia.

But the republic is taking a step beyond that and is planning to use these radio-relay lines for television. TV broadcasting stations have been built in three cities situated at the foot of the Tien Shans—Alma-Ata, Tashkent and Frunze. This means that very soon the shepherds tending flocks of sheep in any of the pastures will be able to choose any one of three TV programmes and see movies, plays, concerts, and broadcasts from stadiums, scientific laboratories, factories and collective farms.

But that is not all. There is every possibility that Madan Mohanlal Atal's dream will also come true. Kirghizia and Tajikistan are India's closest Soviet neighbours. For centuries they have been separated from India by the Himalayas, the world's highest system of mountains. But today, thanks to radio-relay lines, they can be brought closer to each other as never before. Although India is far away, the time is not distant when radio-relay stations will be built in the Himalayas and then the peoples of Soviet Central Asia will be able to see the life of the Indian people with their own eyes, and the Indians will be able to see for themselves how people live in Kirghizia.

6. WITH A DOUBLE-BARRELLED GUN

A double-barrelled gun hangs in the yurta of almost every Kirghiz shepherd, for where there are sheep there are wolves. Particularly large packs of wolves range the mountain pastures in the Tien Shans. And in winter, when snow-storms rage, the Tien Shan wolves grow

reckless. With rocks and the snow-storms hiding them, they steal up to the flocks against the wind. The shepherd, wrapped in a sheepskin, sits on his horse and the wind whistles softly in the barrel of the gun slung across his shoulder. Suddenly there is confusion among the sheep and a piteous bleating. A shot rings out, and with the gun still smoking the shepherd rides up to the flock and sees that wolves had killed two sheep, one of which they had dragged away, leaving the other on the ground. The shepherd fires another shot at random into the film of snow to drive the wolves farther away, and the shot is echoed by the mountains, fading in the distance.

The Central Tien Shans abound in superb pastures. "These mountain pastures, which are free of snow in winter because they are situated above the clouds but below the line of eternal ice, are a remarkable feature of the mountainous lands of Central Asia resulting in general from the prevailing dry climate and, primarily, from the dry autumns," wrote Severtsov. We shall not go to the famous pastures of the Central Tien Shans, for we have already been to the Susamyr Valley, which is representative of most of the pastures: new breeds of fine-fleeced sheep, well-built livestock-breeding settlements and a mechanized agriculture. I shall only list the biggest of the pastures: in the north—the winter, snow-free pastures of Kochkorka, Jungol and Kara-Kujur; in the south—the summer pastures of Aksai and Arpa, which are famous for their grasses; and, lastly, the summer pasture around Lake Son-Kul, which lies to the west of Naryn. But let us make the short trip to the lake.

Son-Kul is one of the loveliest mountain lakes in the world. The very name Son-Kul means "Beautiful Lake," but it is a stern, wild beauty. The lake is surrounded by a ring of low mountains with snow on their peaks. Winds blow frequently from these mountains and when they do they cover the lake with white foam so that it seems that a flock of white geese is bobbing up and down on the greenish-grey waves. The sloping shores are strewn with pebbles, and sedge grows around the inlets. In the pastures around the lake stand the grey yurtas of the shepherds with innumerable flocks of sheep and herds of brood mares grazing near by.

Hoar-frost coats the grass in the pre-dawn hours even in midsummer, but it runs off the grass and flowers as soon as the sun rises.

Before you have had time to warm yourself in the sun, clouds suddenly begin to gather overhead and break out in rain and sometimes even in a snow-storm, which hides the lake behind a curtain of snow. The yurta is your shelter in this kind of weather: you hear the waters raging in the lake, and the smoke from the fire makes a ceiling above you. But the clouds melt quickly letting through the sun, and steam rises from the wet and unnaturally green grass.

The shores of Son-Kul look especially forlorn because you do not see a single fisherman bending over his rods: there are no fish in the lake for it is three thousand and forty-seven metres above sea level and in winter freezes from top to bottom. But these same shores fairly teem with birds. In the early morning and when dusk begins to gather the air in summer literally groans with the flapping of the wings of wild ducks, teals, pochards, peewits and snipe, and with the nasal cries of Indian geese. These geese are rarely found in the Soviet Union and the Kirghiz call them *manka-kaz*.

Where there is game there are hunters. The report of fowling-pieces is frequently heard around Son-Kul. Hunters are usually accompanied by a *taigan*, the Kirghiz borzoi. Stringy, shaggy and long-faced, the *taigan* has a keener sense of smell than other borzois. It is a good runner in the mountains and, thanks to a remarkably developed sense of balance, is not afraid of sheer slopes. In Kirghizia *taigans* are used against foxes, roe-deer, wild goats, the big mountain rams, and even wolves. But most frequently they are used to hunt marmots, to cut them off from their burrows. A well-trained *taigan* helps its master to bag several hundred marmots in the course of a season.

"If the hunter is skilled he will make even the hen-harrier bring down a bustard." The Kirghizes hunt with birds to this day. Around Son-Kul as in other places in the Tien Shans you will come across many a hunter with a falcon, hawk or golden eagle. It affords the Kirghiz hunter tremendous pleasure to release a falcon into a flock of flying geese. The falcon, a "high-flying bird," cuts straight into the flock and enters into combat with the geese in the air, and this struggle provides a thrilling sight. The Kirghizes can never praise their falcons enough, but the professional hunter prefers the hawk. It is more "productive," and among hawks the most prized is the *tuigun*,

the white female goshawk. This bird strikes game not only in the air, as do the falcons, but also on the ground and on water. It gets the better of hares and even bustards. However, neither the falcon nor the *tuigun* can in any way be compared with the "death on wings," the hunting golden eagle.

Resorting to the most incredible stratagems, hunters get the birds' young from nests built on inaccessible cliffs and then expertly train them. The hunting golden eagle (usually the female because the male is smaller and unable to cope with a wolf and sometimes even with a fox) is usually kept chained in a dark place in the house and is made to wear a small leather cap with a coloured crest. When the hunter sets out for game, he pulls the cap over the bird's eyes to keep it from getting nervous, perches it on his left arm which is wrapped in thick leather and lets his hand rest on a forked stick fixed to the bow of the saddle. It is impossible to bear the weight of this huge bird in any other way.

After choosing the spot for the hunt, the master of the golden eagle lifts the cap off the bird's eyes. The eagle spreads its wings and soars into the sky to a tremendous height. Spying out a fox, wolf or roe, it drops like a stone on to the head of its prey. In the meantime, the hunter, applying spurs to his horse, gallops to the scene of the mortal combat and every second is precious to him. If the bird does not quickly see the familiar figure of its master and does not hear the commanding cry of "Kii-tu," it will tear the fox and thus spoil the valuable fur. But more important is that once it feels itself free of the master and realizes that meat can be found without his help, it might fly to the cliffs on the mountain range never to return.

It is of course interesting to accompany a professional hunter, but it is more fun to roam about the ravines and boulders of the Tien Shans with a double-barrelled gun in your hands in the company of a small group of amateur hunters. I consider the days I spent hunting in the Tien Shans as among the best in my life. When you have a gun in your hands, your sight and hearing are so tense and keen that the landscape, which in the mountains is always unique and startling, leaves a lasting imprint on your mind.

You set out on horseback long before dawn. The ravines are covered with a pre-dawn haze and there is dew on the grass. Where the

trail runs along a narrow ledge you hear the stirrups striking the stones. Amid the rocks near the shrubby-overgrown banks of a stream you find a secluded spot for your camp, where you leave your packs and horses. Then, with your gun grasped firmly, you follow the stony trail into the mist, listening to every sound. In the stillness of the mountains you can hear everything: the soft murmur of a brook, a stone that has been loosened by your feet rolling down the slope and there, at the bottom, frightening away some bird. A stone partridge? You stand hardly daring to breathe as you strain your ears, trying to guess the direction it had taken.

The morning mist is blown away and the sun rises. Black shadows begin to scamper about the ravine. You hear a "thin metallic sound as though somebody was using a blunt file on a piece of iron," wrote V. Parshkov, a well-known hunter in Kirghizia, exactly describing the cry of the *ular*, the mountain turkey. This is the *ular's* morning greeting to the sun. But if the sound of a blunt file being drawn across iron is heard in the day-time, the mountain goats know that the *ular* is warning them of danger, of the approach of a panther or of man. The sun gradually heats the stones and warmth rises from them. Your day's hunting begins.

I shall not start on any hunting stories. That subject has no end and once you start on it you cannot stop. But I do want you to share my impressions of the Tien Shan landscape. You steal up to a little flock of *ulars* past boulders covered with a shining dark-brown "tan." You make a circuit along the slope and in the pass, in the green frame of a pasture, a transparent vision of icy peaks rises before you. And on either side of you there are other chains of silvery peaks with dark forests beneath them. To the side of you hangs a cloud. It is motionless as though it had caught against the rocks and had got stuck. In the valley below you shines a little lake that looks like an oval mirror left at the foot of the mountain. The scenery is so entrancing that you forget about hunting and sit down and look about you.

It was perhaps in a moment like this, when sitting on a mountain and deeply inhaling the pure air, that the Tien Shan bricklayer Mam-betaly Jolochiyev composed his unsophisticated song, which was taken down by the poets S. Fiksin and K. Kuliyev.

*I was born and grew up in the hills
Where the gleam of the summits filled my eyes.
But the charm of these sun-flooded mountains
Never fails to thrill me to this day.
After the joy of hard work,
The grass looks greener,
The mountains higher;
My heart is at rest.*

Through your binoculars you see a bluish, hardly noticeable wisp of steam high up among the boulders. This is the breath of a herd of mountain sheep. Then you bring your lens to rest on a ledge occupied by eagles. Several of them are sitting on the ledge with filled craws, their wings hanging loosely, resting. One of the eagles, probably the leader of the flock, stretches and then draws in its neck, a half-collar of long white feathers rising at the back of its head.

No sooner have you plunged into a contemplation of eagles, than a cold wind suddenly rises and a cloud appears between the boulders, virtually swooping down on the pass. With this change of weather all the colours disappear, and a mist clothes the boulders. Snow, dry and hard, begins to fall. Retreating in the face of the wind, you make your way down the mountain, and the lower you go the wetter the snow becomes and streams of water run underfoot. The clouds grow ever lighter, filling the air with a blinding mist out of which the sun finally peeps out again over the Tien Shans.

You return to your camp just before nightfall: in the Tien Shans night descends suddenly, as soon as the sun sets beyond the mountains. You hang your hunting trophies and your bandolier on the ledge of a rock and join your companions round the fire. The tongues of flame shoot into the starry sky and your shadow lengthens out for a kilometre, journeying along the distant cliffs and boulders. The water in the brook beside you tinkles like a bridle. And as the hunters' feast progresses, the stories begin.

Like hunters all over the world, the Kirghiz hunters enjoy telling a tall story. There is one in the tale about Jeyerencheh Chechen:

"...One day Tüle Murza, boasting as was his wont, described how

he fired at a wild goat and with one bullet shot it through the tip of its ear and a hoof.

"Ashamed for his son, the eloquent and upright Jeyerencheh Chuchen felt he had to say something to explain away his words.

"'There now, son,' he said 'You must have fired when the goat was scratching the end of its ear with its hoof.'"

But let us turn to real facts. Here is what Ivan Bratko, a hunter from the Frunze Zoo Base, told me about his "third panther." Panthers, or snow leopards, as they are also called, are hunted chiefly by hunters from zoo bases. The animals are caught alive and then from Kirghizia they are sent to zoos throughout the Soviet Union and in Europe.

Bratko set his trap on a narrow ledge close to the crest of a mountain range. Amid the stones on this ledge there was a strip of dirty snow with the track of a large panther. The hunter regularly made the rounds of his traps and one day as he approached this particular trap on the ledge (he had left his horse below, six hundred metres away, because the trail led steeply up the boulders) he caught sight of the animal when he was still some distance away. As he drew nearer the panther tried to jerk free, growling threateningly and hate filling its opal-coloured eyes. Bratko sat down near the panther, and smoked a cigarette, resting after the strenuous climb. Then he pulled a cage out of its hiding place in a crack between rocks which he had covered with branches.

He had made this iron-barred wooden cage after he had lost his first panther. These animals are nervous, unlike the wild goats. A goat can be carried across a saddle and almost at once after its capture this dweller of the mountains peacefully nibbles grass from the hunter's hand and drinks water from his flask. After Bratko had trapped his first panther, he had tied it and then lashed it to the saddle. The horse had trembled and snorted with fright, and the panther had also snorted and snarled and then suddenly died from the shock. The hunter had returned to his base empty-handed.

Now, with the cage in his hands, Bratko approached the trapped animal from behind and began to "put" the cage on the panther. The animal furiously beat its tail and kicked with its hind legs, trying to dodge and tear the cage with its teeth. Panthers are exceedingly

View of Kara-Balkak Glacier





Thai parliamentarians visit T. Kulatov, Chairman of the Presidium of the Supreme Soviet of Kirghizia

strong animals. Their leap is fifteen metres long and they attack horses and even the great mountain ram which is armed with formidable twisted horns. The hunter's doggedness and agility won in the end. He got the panther's body and head in the cage, then freed the front paw from the vice in the trap and quickly banged the door shut. While the panther was furiously lunging against the bars of the cage, Bratko sat down again and lit another cigarette.

Finishing his smoke, he lifted the heavy cage with the panther onto his shoulders, made his way to his horse, fixed the cage to the saddle and taking the horse, which was squinting its eyes with fright, by the bridle he led it down into the valley through a broad cleft in the sheer rocks. There he led his horse away from the beaten trail, taking a circuitous route round the villages: experience had taught Bratko to do that. Shortly before this he had passed through the villages with his second panther, which had also been in a cage. The children from these villages had come running to look at the panther, thrown sticks at it and teased it. The nervous shock had been too much for the animal. It, too, died. But this time Bratko brought his catch safe and sound to the base. The panther lived there for a few weeks, grew used to captivity and was sent by train to a zoo in Germany, if I am not mistaken.

For people who love nature there still are untamed places in the Central Tien Shans. I would suggest an interesting route that would take you southward from Naryn to Atbashi as this would give you an opportunity of stopping at Stud Farm 113. For centuries Atbashi has been noted for its horses, and the very name "at-bash" means "horse's head." From the stud farm the road takes you farther south to a ravine in the Atbashi Mountains, where you turn off the road and head for Tash-Rabat. The ruins of this medieval caravanserai look as though they are a fossilized nomad camp with a great stone yurt in the middle. Legend has it that Tash-Rabat was built by Muhammed Sultan, a zealous advocate of Islam, who, we are told, ordered turbans to be nailed to the heads of people who refused to wear them. From Tash-Rabat you cross the mountain range for a view of Chatyr-Kul, a lake swarming with trustful birds almost at the border of Sinkiang.

If you go there be sure to visit Turgart, "The Eden of Pastures." These are caves that had been the home of Stone Age men. From

these caves follow the trail of the primitive hunters round Aksai, one of the famous Tien Shan pastures, recross the Atbashi Mountains and, moving eastward along the channel of the Atbashinka River, step into the wild Janyjer-Ulan forests. There the world of Tien Shan birds and animals has retained all of its primitive splendour. The same eastward path leads gently up into the mountains to a unique part of Kirghizia, to the Tien Shan *syrts*.

7. COLD DESERT

These *syrts* leave a strange impression when you see them for the first time. As you rise up the pass you are quite sure that from the top you will get a view of mountains as steep as the one you have left behind and of still higher mountains. Instead, at a great elevation (more than three thousand metres above sea level) in the heart of the Tien Shans you find a level plain. True it is full of gently sloping mounds and is strewn with stones of different sizes, but it is a plain for all that. In the rest of Kirghizia there is some sort of system in the way the mountain ranges follow one another and alternate with deep valleys. But in the *syrts* there is not even a hint of order. The elements have heaped on them huge and grotesquely shaped blocks of ice and, as though lazy to do anything else, left flat, steppe-like tablelands between them.

The Kirghiz word *syrt* means "back." This broad and flat "back" of the Tien Shan ranges extends for hundreds of kilometres. There are huge glaciers right on it and also running parallel with it. These glaciers give rise to rivers that flow along the *syrts* so slowly that when a flock of sheep crosses them or a wind blows in the direction opposite to the current the water stops and sometimes even turns back. The paths along the rivers frequently run into small swamps where horses' hoofs make a squelching sound in the mud. Ice covers these rivers at night in the summer. A large number of dish-shaped little lakes are scattered about the *syrts*: the frozen ground does not let the water deep into the soil and enormous areas turn into swamps because of this.

You will find the *syrts* stern, forbidding and desolate. Winds blow

almost continuously, and in summer they prick you with icy needles and fill your eyes with snow, and at night they clothe the hills with hoar-frost. In the *syrts*, the winters are colder than in Novaya Zemlya. The summers, too, are the same as in Novaya Zemlya, only they are a month shorter.

The glacial moraine looming black in the distance and the enormous, lichen-covered boulders give you a glimpse into the prehistoric past of our earth. When these places were visited by a scientific expedition from Leningrad, the members of the expedition had the feeling that at any moment "a hairy mammoth would appear from behind a hill followed by men with stone weapons"

"What we saw," they wrote, "was a mock-up of the Ice Age, a piece of conserved landscape of that epoch."

But as we make our way across the *syrts* we are met not by a mammoth but by a three-ton truck covered with a tarpaulin, and among the blocks of ice we encounter a man, not with stone weapons but with a tractor and a barrel of fuel near by "What is he doing in this cold desert in the Tien Shans?" we ask ourselves in bewilderment. "Does he want to tell us that not only is life possible in these places but that man's economic activity can be fruitful amid this ice?"

We have traversed across the length and breadth of the *syrts* and the only vegetation we found were rare tufts of grass on bare, cracked and frozen ground. In the basin of the Arabelsu and Kum-tere we saw a marshy tundra without a single tree or shrub. In the salt-marsh deserts of the Karasai and Ak-shirak valleys the wind gave rise to sandstorms and the air, saturated with frost-dust, was never free of mist. Does this tractor-driver want to tell us that the sparse pillows of dryas which are shaped as small, lilac-green dunes, or the rare meadows of hairy sedge that grows in rings and is such a sorry sight that the Kirghiz call it the "hair of an old woman," or, lastly, that the wild grass and cereal plants growing in shady spots and in the shelter of boulders and resembling a thick and hard brush—does he want to tell us that this is a luxuriant pasture?

But that is really the case. Although these "hairs of an old woman" grow sparsely they are wonderfully nourishing. Horses thrive on them. The crooked little wormwood shrubs growing far from each other with leaves lying on the ground are also nourishing, to say noth-

ing of the thick brushes of *tipchak*, which is the chief cereal plant in the Tien Shans. Even the dark-violet feather-grass of the Sary-Jas *syrts*, which cannot be classed among superior grasses, is a whole-some feed for livestock. But that is not all there is to it.

The whole point is that the *syrts* are winter pastures. Yes, winter pastures although this sounds strange when you speak of places with a climate like that in Novaya Zemlya. The freak here is that snow falls mainly in the summer, melting on the ground, while in winter, from August to May, thanks to the complete absence of evaporation, there is no snow on the *syrts*. The snow clouds that move in winter from the direction of the neighbouring Issyk-Kul Valley do not rise high enough to "roll over" onto the *syrts*. The Issyk-Kul shepherds take their sheep and horses above the line of clouds where throughout the winter they can graze, feeding on the tufts of frozen grass in this giant "refrigerator."

Kirghiz animal-breeders come to this "refrigerator" together with the sheep and horses. It is in the character of the Soviet man to change nature wherever he goes, making it serve his needs. Through his efforts the cold desert of the Tien Shans has stopped being a desert. Motor roads have been built to it from the Issyk-Kul Valley. Livestock-breeding settlements with schools, electricity and radio stations have been built near the blocks of ice (and in some places near Stone Age caves that have been discovered by archaeologists). Experimental vegetable gardens have been laid out and artificial meadows planted. In a matter of a few years the *syrts* have taken the step from the Ice Age to our modern age of socialist industry, to our age of machines. Although at present there are only small oases of this new life in the *syrts*, the time is very close (we know that for certain) when there will hardly be a place in the *syrts* where people might expect a mammoth to appear from behind a hill.

Eastward the *syrts* become higher, the mounds steeper and the valleys deeper until finally you again find yourself in a realm of tall mountains, yawning chasms, ravines, crevasses and great canyons, but they are not green as in the Central Tien Shans but garbed in an armour of eternal ice and snow. This is the immense Khan Tengri group of mountains, the Kirghiz "Arctic."

These ice peaks tower over the whole of Kirghizia, over her valleys

and ravines, her alpine pastures, rocky ridges and glacial circuses. Colossal, sombre glaciers strewn over with fragments of rock, slide slowly down the shoulders of these giants. Not even the hardy mountain ram, nor the wild Indian goose visit them. For thousands of years the only glimmer of life in this land of desolation was in the blue-green weeds growing in small, isolated colonies on some of the glaciers. In Western China these mountains, in addition to being named Celestial, are called Mus-Tag, which means Ice Mountains. Peak Khan Tengri, the "Lord of Spirits," a gigantic, ice-bound trihedral marble pyramid, raises its bluish cap on almost the very border of Sinkiang, amid a concentration of mountain chains

Seen for miles around. Peak Khan Tengri, which is nearly seven thousand metres high, had attracted mountain-climbers and individual investigators even before the Revolution. But nobody in those days even suspected that close to Khan Tengri there was a taller peak: this shows how hard it is to study this land of ice. Planned exploration of the Kirghiz "Arctic" was started after the October Revolution. Scientific expeditions were sent to Kirghizia. Hundreds of mountain-climbers began to storm these great peaks. And two permanent scientific stations, at first a wintering station at Petrov Glacier (it is now called the Tien Shan Hydrometeorological Station) and then the Physical and Geographical Station of the Kirghiz Academy of Sciences (situated close to the glaciers that feed the Chon-Kyzylsu River), appeared in the very depth of the mountains, in the region of the *syrts*.

Scientists are investigating the glaciers, those fantastic labyrinths of deep crevasses, gullies, faults and pillars of melting snow; they descend into the glacial grottos where the milky-green streams of melt water rush; they set their instruments up on the limbs of the glaciers, whose colour, described so accurately by Semyonov-Tien-shansky, resembles the colour of marble statues that have grown dark with age; they return to their base camp at night, when in the sky the stars shiver so violently that it makes you feel cold just to look at them; in the daytime they photograph the more distant glaciers from helicopters; they keep a log for every glacier, and record every new thing they learn about it; and they are fully aware that the eyes of the whole world are on them: at Brussels, the physical and geograph-

ical station in the Tien Shans was officially recognized as one of the basic centres investigating glaciers under the programme of the International Geophysical Year.

A glaciologist working in the Tien Shans began his diary with the words: "What joy and happiness you, rivers that feed on the glaciers, bring down into the valleys!" There, in the Tien Shans, he had every cause to feel proud of his profession. Streams ran out across all the borders of Kirghizia to the flowering oases of Uzbekistan and Western China, to the Kazakh steppes and deserts. Great rivers, the Syr-Darya, the Chu and, partially, the Amu-Darya are born in its snowy peaks. Kirghizia supplies all her neighbours with water. There is enough water in the eternal snow and glaciers of the Tien Shans and the Pamir-Alai ranges to last Central Asia for many centuries.

And the people realize this full well. Although the nomads never went to the glaciers, they nevertheless have legends about the ice and snow of their country. One of these legends was related to me by my Kirghiz guide in an alpine tent. This legend has a direct bearing on the hot dispute that in recent years has divided the Tien Shan glaciologists into two camps. Before telling you of this dispute, here is the legend.

In that happy age when skylarks built their nests and brought up their young on the backs of rams, the Sary-Jas Valley was covered with orchards and shone like the leaves of a tulip washed by spring rain. And there lived Chinar, the loveliest girl in the world. Hers was a beauty so radiant that in the light from her face the market could carry on its business at night as in the day. And for that reason the people could not tell when it was day and when night. And because the day never ended trade was unbalanced. And the people of the market became angry and made Chinar put on a veil to cover her face and in this way they restored the division between day and night.

But one day there came the chief Batyrbai at the head of his warriors. Batyrbai's face was marked with pocks as big as copper coins, one eye was higher than the other, he had a huge nose and his head was as large as a pot, and one ear was longer than the other. He pillaged the market, quenched the fires in the fire-places and posted

guards at the *ariks*. As payment for water he demanded the comeliest of the maidens.

Resentment flared up in the breast of Chinar, whose beauty eclipsed that of all the other women in the Sary-Jas Valley.

"O, Merciful Allah!" she cried. "Why should I guard my honour if you want to give me to Batyrbai, a man with one ear longer than the other?"

Saying which she tore off her veil and threw it away. Her beauty startled Allah. He seized Chinar's veil, carried it into the sky in view of the people and, turning it into a cloud, wrapped it round the sun. And darkness took the place of daylight. The darkness was so intense that even Chinar was powerless against it. From that hour the sun no longer warmed the earth. The snow did not melt in the mountains, the rivers dried up and the water ran low in the *ariks*, the very water that Batyrbai wanted to exchange for Chinar.

When Batyrbai saw what had happened, he ground his teeth and his face darkened with fury.

"Chinar will be mine all the same!" he said.

He sent six thousand boys to the slopes of the mountains, ordering them to light fires. Then he took a pick, climbed to the icy peak of the mountain and began breaking away pieces of ice and throwing them down into the slope. The ice fell on the fires and melted and the rivers filled with water and enough of it accumulated in the *ariks* to enable Batyrbai to exchange it for the lovely Chinar.

Allah saw this and was astounded. He did not know what to do or who to send. And Kaukab-as-Sabakh, the honey-lipped houri, said:

"Send me!"

But Allah knew she said it only out of curiosity, for she had never seen a man who had one ear longer than the other. And Allah did not send her.

In paradise there was an old man, so old that he was not fit for anything: because of his great age his mind was empty of thoughts and all he could do was to repeat what others said. Hearing Kaukab-as-Sabakh's words, he repeated: "Send me!" And Allah sent him to Batyrbai.

The old man descended to the peak of the mountain and stopped unseen near Batyrbai. Batyrbai broke off the last piece of ice and

said: "Now Chinar will be mine!" And the old man repeated: "Now Chinar will be mine!" Batyrbai turned round but saw nobody and he said in a louder voice: "No, mine!" And the old man raised his voice: "No, mine!" To hide his fright, Batyrbai laughed. And the old man laughed. Batyrbai moved in the direction of the voice and it seemed to him that the mountains, the stones, everything around him was laughing. He ran down the mountain and laughed until he lost his reason from fright.

And seeing this, Allah said: "In truth you can never know what you'll find or what you'll lose. I sent an old man who could only repeat what others said. And it turned out that this has benefited people. So from now on let this man guard the ice and snow on the mountains."

O traveller! If you hear an echo in the mountains, know that the old man is telling you that you have passed beyond the permissible line and must turn back. If in the middle of the day you see the sun grow dark, know that it is Allah throwing Chinar's veil over it to remind people that they must not take by force or cunning what does not belong to them. And the water belongs to no one because if there had been no water there would have been no grass, no people, no force and no cunning.

Some fifteen years ago the scientists of the Tien Shan Physical and Geographical Station asked themselves, like the legendary Batyrbai, if it was possible to intensify the melting of the glaciers to give more water to the rivers.

Several years of experimentation showed that it was possible. Through these experiments scientists found that if the glaciers are "blackened" with coal-dust, they absorb larger quantities of heat and melt quicker. The rivers become deeper, noisier and more turbulent. The scientists calculated that if all the glaciers were covered with coal-dust from the air there would be half again as much water in the Tien Shan rivers. That would be incomparably cheaper than building great storage lakes. And a hundred times faster! "But what would then happen to the glaciers?" other scientists asked. "Would

they not dry up? Would that not throw the water regime of the Tien Shans into disorder?"

"What if it does?" the first group of scientists countered. "According to approximate estimates the reserves of ice in the Tien Shan glaciers is enough to last 1,500-2,000 years. What difference will it make if we expend it in a thousand years? At the rate engineering is developing in our atomic age, it will take mankind less than a hundred years to distribute the earth's supply of water justly by turning rivers and sending them into new channels for distances of more than a thousand kilometres. When that is done our present-day economy in terms of milleniums will look simply absurd."

"No," objected the second group. "Whatever you say, we have no right to plunder nature in the Tien Shans. We are in duty bound to preserve the riches of nature for the generations that will follow us."

This is, of course, a simplified account of the dispute. Both groups of scientists have advanced many purely scientific arguments, which they are supplementing with experiments and observations. But the essence of the dispute remains the same. We cannot undertake to judge which group is right. The dispute continues and time alone will decide it. What interests us in this dispute at the moment is the solicitude that Soviet people are showing for the generations that will live in the distant future. It is only in a country where people have grown accustomed to thinking of the destiny of the whole of mankind, of the future of the entire globe, that a dispute could flare up over a subject such as this.

In addition to studying the ice reserves, that treasure-store of the Central Asian rivers, the Physical and Geographical Station in the Tien Shans has given Soviet science many new and valuable facts about magnetic and atmospheric phenomena at great altitudes. Every summer tens of scientific expeditions leave for the depths of the Kirghiz "Arctic." Endurance, strength and courage are qualities required of members of these expeditions. But the scaling of peaks is not an end in itself so far as these expeditions are concerned. First and foremost the task they set themselves is a scientific one.

Khan Tengri and the mountains around it attract great numbers of mountain-climbers. The Tien Shans are hard mountains to climb and climbers must train seriously before attempting to scale them.

Near Frunze in the Alaarchi Ravine of the Kirghiz Range there is a permanently functioning camp where young mountain-climbers train and ascend the neighbouring peaks which though "easy" when compared with the six-thousand-metre Khan Tengri group, are a gruelling test when compared, say, with the Alps, the home of mountain-climbing.

Nothing can parallel the excitement a mountain-climber feels when for the first time, sometimes from the base camp, he sees the peak he has made up his mind to scale. A description of Khan Tengri is given by V. Gusev, a Soviet mountain-climber. He wrote: "...On the third day we approached the foot of Khan Tengri. Its pyramidal peak of light-yellow marble seemed to rest on a gigantic pedestal of black slate. On its shoulders it wore a regal mantle of snow, that came down in folds with shining ledges and overhanging blocks of ice that seemed to be on the verge of breaking loose. Something cracked above us. A layer of névé broke away and thundered down the glacier as a blinding, smoking white mass. A snow avalanche is a magnificent and awe-inspiring spectacle. It is something you never forget."

The melodious song of an alpine lark and the distant and hardly audible cry of a bearded eagle as it soars to a tremendous height with the skull of a ram in its claws in order to dash it against the rocks from above the clouds and feast on the brain are the last sounds that mountain-climbers hear as they ascend a glacier. Then follows complete silence, complete if we discount the moaning of the wind which changes to a high-pitched wail, and the rumble of an avalanche that covers the glacier, the stones and even the sky with fine snow-dust which hangs in the air for a long time.

It is easy to move over névé, a field of granular, hard-packed, glossy ice which is as smooth as parquet. But before reaching a névé field you have to get through a labyrinth of blocks of ice and crevasses half-covered with snow and harbouring danger at every step. Climbers prefer to bypass crevasses but (as N. N. Mikhailov, who scaled Khan Tengri in his youth, accurately points out) on a glacier they "form an intricate labyrinth and to pick your way across a glacier is the same as winning a game of chess." Whenever they can, climbers therefore lash themselves together with ropes and crawl over the

ice bridges across deep, seemingly bottomless cracks. When the road is suddenly blocked by a crack that is too wide to crawl over or bypass, climbers have no alternative but to descend to the bottom with the help of ropes and then climb up the opposite wall by cutting steps with picks. When you are climbing such a wall you do not stop for it is as hard to stand still as it is to climb: your hands and feet tremble from the strain and the least slip spells disaster. Yet climbers always elect to move across glaciers wherever possible. The snow in the Tien Shans is incomparably harder to negotiate.

On the slopes of the Celestial Mountains the snow is loose and as dry as powder. In places you sink into it up to your knees, your waist and even your ears. This drains your strength for on your shoulders you have a heavy haversack with a Himalayan tent and a stock of provisions, and on your feet you wear heavy mountaineering boots. As you plod through the snow you leave a hole in it at every step. Twenty or thirty steps are all you can take at a stretch. And as you battle against the snow you keep your eyes on the snowy slopes above you: a sudden avalanche may knock you off your feet and be your grave. Yes, climbers are happier when they are pushing across a labyrinth of crevasses on a glacier.

At the end of the day you halt in a place that is sheltered against the wind and avalanches. You make a cave in the snow or simply pitch a tent on the ice. O, the glory of a mountain-climber's camp. No words can convey the spirit of comradeship that makes everybody, acutely conscious of his duty, cheerfully drive pegs for the tent into the ice with hands stiff with cold. Before long a lamp is lit in the tent and the spirit-stove is humming merrily. You briefly exchange the day's impressions, quickly finish off a plate of half-cooked, almost cold soup, followed up by some dried fruit and a biscuit or two, and make yourself comfortable in your warm down sleeping bag. The only sounds above the sleeping climbers in a tiny tent amid the mountains are the rustling of the falling snow and the whistling of the wind which now and then turns into a sinister howl.

As day breaks, a dull light penetrates into the tent through the celluloid peep-hole. While you are waiting for your tea you scrape the snow out of all the corners of the tent with a spoon. And if you are not staying on for a day or two to get used to the altitude or if

inclement weather is not imprisoning you in your camp, you push farther ahead, again wading through the loose snow or struggling against the wind with your head bent and your hands on your bent knees, again clambering up sheer boulders with the help of rock hooks and grabs, again hanging above the clouds and looking for the "best" road to the crest of the mountain over which streams of snow-dust flutter like flags in the wind. Your woollen double-breasted jacket and warm trousers which are buttoned up to the ankles do not save you from the cold. You begin dreaming of camp-fires, the sea, a hot sun. And in your mouth there is a taste of snow that you cannot get rid of. You want to smoke, but there is not enough oxygen for your matches. You spit and your spittle turns to ice before it reaches the ground, and rolls down the slope. There are only a few more metres to go: you take a step, then rest, then another step and rest again. . . . And, finally, you reach your goal—the peak.

During the first few moments you are too tired even to rejoice. You just sink down on a stone and recover your breath. But the superb panorama of snow-clad peaks that suddenly opens before you makes you seize your camera and again fills you with excitement. A short time after that you and your comrades are already gathering stones for a cairn, writing with numb fingers a note saying that the peak has been conquered and hiding the note in a tin beneath the small pyramid of stones.

The Tien Shans attract large numbers of Soviet mountain-climbers. Khan Tengri (6,995 metres), for years considered inaccessible, was conquered in 1931 by a party led by M. Pogrebetsky. In 1934, V. Abalakov led the first group of mountain-climbers to the top of Lenin Peak (7,124 metres) in the Trans-Alai Range. This peak was regarded as the highest point in Kirghizia. But in 1943 a topographical expedition headed by P. Rapasov proved that a hitherto ignored peak located near Khan Tengri was higher still: this was Peak Victory (7,439 metres), the tallest in Kirghizia and the second tallest in the Soviet Union. For this discovery, the expedition and personally V. Ratsek, a well-known Kirghiz mountain-climber, received the Semyonov-Tienshansky Medal, which is awarded for major geographical discoveries. Peak Victory was only scaled in 1956 by a party of mountain-climbers with V. Abalakov at their head. This was an im-

portant achievement. It was preceded by many other successes won in the face of great hardships, which were overcome by experience, resourcefulness and courage. In the Tien Shans there are many other unconquered peaks that await their dare-devil conquerors.

As we leave our wind-blown peak and, leaning against our ice-picks, look around at the multi-tiered panorama of neighbouring mountain-tops where the wind is chasing the whirling and zigzagging snow, and shut our eyes from time to time to allow the tiny icicles around them to melt, I would like to use this opportunity to say, here on the summits of the Tien Shans, a few words about the late "master of the glaciers" of Central Asia, about my teacher Nikolai Leopoldovich Korzhenevsky. The glaciers of Central Asia cover a total area of eleven thousand square kilometres and it was no little achievement to be the "master," the uncrowned king of this land of ice. Korzhenevsky was a veteran explorer of the Central Asian mountain glaciers and compiled the first and only "catalogue" of these glaciers. His name has been given to one of the biggest glaciers (on Mount Talgar) in the most northerly of the Tien Shan ranges, the Transili Range, and to a huge glacier on Lenin Peak in the Transalai Range, which is the southernmost of the Kirghiz mountain chains. One of the tallest peaks in the Pamirs has been named after his wife, Yevgeniya Korzhenevskaya.

In 1922-23, Nikolai Leopoldovich Korzhenevsky was our teacher at the Przhevalsky School in Tashkent. Those stormy years were a period of inactivity for geographers and this circumstance compelled a well-known explorer to become a schoolteacher. Though geography was his subject he taught physics, but even in teaching physics he developed in us a taste for geography. His passion for travelling was so great that it did not require much effort to get him on to his favourite subject. We took advantage of this and frequently the physics lesson would, through our stratagem, be cut short and Nikolai Leopoldovich (as we affectionately began to call him after hearing from his own lips how he encountered a snow leopard in the mountains) would tell us fascinating stories about his travels in Central Asia. We listened with our mouths agape: he spoke so vividly that to this day his descriptions of the mountain landscapes retain all their freshness in my mind.

He spoke of Pyotr Semyonov-Tienschansky and we could almost see that famous explorer, not between the covers of a book but alive, in pince-nez with a cord hanging loosely on his breast, with a white beard that was so unusually broad and thick that it seemed as though it were glued to his chin—a regular Russian *aksakal* with enormous Order stars on his civilian jacket—“with two stars that took up half his breast,” shaking our Nikolai Leopoldovich by the hand, joking, laughing, as he sent him on expeditions to the Tien Shans and the Pamirs. I shall never forget the thrill that used to go through us at Korzhenevsky’s lessons. He made us feel we were in contact with living history, taking part in a kind of relay race, and this made us, the whole class, regard ourselves as the direct heirs of the great Russian explorer. With all his heart Nikolai Leopoldovich wanted each one of us, his pupils, to be a geographer. Many of us did follow in his footsteps. I did not become a geographer but I owe my love for travelling and my interest in Central Asia entirely to him, and it is to his bright memory that I dedicate this book.

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